Alllol 294979

NATL INST OF STANDARDS & TECH R.I.C.

A11101294979
/Bulletin of the Bureau of Standards
QC1 .U5 V10;1914 C.2 NBS-PUB-C 1905





INDEX TO VOLUME 10

A

Accuracy of the formulas for the ratio, regulation, and phase angle of transformers, 279.

Agnew, P. G., and F. B. Silsbee, Accuracy of the formulas for the ratio, regulation, and phase angle of transformers, 279.

American direct current watthour meters, 161.

Ammeters, High-frequency, 91.

Atmospheric conditions in the testing of sugars, 537-

В

Bates, F. J., and F. P. Phelps, Influence of atmospheric conditions in the testing of sugars, 537.

----, G. W. Vinal and, Comparison of the silver and iodine voltameters and the determination of the faraday, 425.

Black body, Constants of spectral radiation of, 1.

Brooks, H. B., Testing potential transformers, 419.

Buckingham, E., Windage resistance of steam turbine wheels, 191.

Burgess, G. K., and J. J. Crowe, Critical ranges A2 and A3 of pure iron, 315.

----, and R. G. Waltenberg, Melting points of the refractory elements. I—Elements of atomic weight from 48 to 59, 79.

C

Coblentz, W. W., Constants of spectral radiation of a uniformly heated inclosure, or so-called "black body," I, 1.

Comparative study of American direct-current watthour meters, 161.

Comparison of the silver and iodine voltameters and the determination of the faraday, 425.

Constants of spectral radiation of a uniformly heated inclosure, I, 1.

Critical ranges A2 and A3 of pure iron, 315. Crittenden, E. C., and A. H. Taylor, Pentane lamp

as a working standard, 391.

——, E. B. Rosa and, Flame standards in photometry, 557.

Crowe, J. J., G. K. Burgess and, Critical ranges A. and A₃ of pure iron, 315.

H. C. Dickinson, C. W. Waidner, and, Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 267.

D

Dellinger, J. H., High-frequency ammeters, 91. Dickinson, H. C., C. W. Waidner, and J. J. Crowe. Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 267.

—, D. R. Harper, and N. S. Osborne, Latent heat of fusion of ice, 235.

E

Electric furnace, Production of temperature uniformity, in, 451.

Elements, Melting points of the refractory, 79.

I

Faraday, Determination of the, 425.

Fitch, T. T., and C. J. Huber, Comparative study of American direct-current watthour meters, 161.

Flame standards in photometry, 557.

Formulas for the ratio, regulation, and phase angle of transformers, Accuracy of the, 279.

Fusion of ice, Latent heat of, 235.

G

Gray, A. W., Micrometer microscopes, 375.

——, Production of temperature uniformity in an electric furnace, 451.

H

Harper, D. R., H. C. Dickinson, and N. S. Osborne, Latent heat of fusion of ice, 235.

Heated inclosure, Uniformly, Constants of spectral radiation of a, 1.

Height, required, Note on the setting of a mercury surface to a, 371.

High-frequency ammeters, 91.

Huber, C. J., T. T. Fitch and, Comparative study of American direct current watthour meters, 161.

Ι

Ice, Latent heat of fusion of, 235.

Icebergs, Observations on ocean temperatures in the vicinity of, 267.

Influence of atmospheric conditions in the testing of sugars, 537.

Iorn, Pure, Critical ranges A2 and A3 of, 315.

K

Kanolt, C. W., Melting points of some refractory oxides, 295.

L

Lamp, Pentane, as a working standard, 391. Latent heat of fusion of ice, 235.

M

McDaniel, A. S., G. W. Vinal and, Silver voltameter—Part IV. Third series of quantitative experiments and special investigations, 475.
Melting points of some refractory oxides, 295.
Melting points of the refractory elements, 79.
Mercury surface, Note on the setting of a, to a required height, 371.

Micrometer microscopes, 375.

0

Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 267. Ocean temperatures, Observations on, 267. Osborne, N. S., D. R. Harper, H. C. Dickinson and, Latent heat of fusion of ice, 235. Oxides, refractory, Melting points of some, 295.

P

Pentane lamp as a working standard, 391.
Phase angle of transformers, 279.
Phelps, F. P., F. J. Bates and, Influence of atmospheric conditions in the testing of sugars, 537.
Photometry, Flame standards in, 557.
Potential transformers, Testing, 419.
Production of temperature uniformity in an electric furnace, 451.

R

Radiation, Constants of spectral, of a uniformly heated inclosure, 1.

Ranges, Critical, A2 and A3 of pure iron, 315.

Ratio of transformers, 279.

Refractory elements, Melting points of the, 79.

Refractory oxides, Melting points of some, 295.

Regulation of transformers, 279.

Resistance of steam turbine wheels, Windage, 191.

Rosa, E. B., and E. C. Critlenden, Flame standards in photometry, 557.

voltameter—Part IV. Third series of quantitative experiments and special investigations, 475.

S

Setting of a mercury surface to a required height, 371. Silsbee, F. B., P. G. Agnew and, Accuracy of the formulas for the ratio, regulation, and phase angle of transformers, 279.

Silver and iodine voltameters and the determination of the faraday, Comparison of the, 425.

Silver voltameter—Part IV. Third series of quantitative experiments and special investigations, 475.

Spectral radiation of a uniformly heated inclosure, Constants of, r.

Standard, working, Pentane lamp as a, 391.

Standards, Flame, 557.

Steam turbine wheels, Windage resistance of, 191. Stillman, M. H., Note on the setting of a mercury surface to a required height, 371.

Sugars, Influence of atmospheric conditions in the testing of, 537.

T

Taylor, A. H., E. C. Crittenden and, Pentane lamp as a working standard, 391.

Temperature uniformity in an electric furnace, 451. Temperatures, ocean, in the vicinity of icebergs and in other parts of the ocean, Observations on, 267.

Testing of sugars, Influence of atmospheric conditions in the, 537.

Testing potential transformers, 419.

Transformers, Accuracy of the formulas for the ratio, regulation, and phase angle of, 279.

Transformers, Potential, 419.

Turbine wheels, Windage resistance of, 191.

U

Uniformity of temperature in an electric furnace, 451.

Uniformly heated inclosure, Constants of spectral radiation of a, r.

V

Vinal, G. W., and S. J. Bates, Comparison of the silver and iodine voltameters and the determination of the faraday, 425.

, E. B. Rosa, and A. S. McDaniel, Silver voltameter—Part IV. Third series of quantitative experiments and special investigations, 475.

Voltameter, Silver, Part IV. Third series of quantitative experiments and special investigations, 475.

Voltameters, Comparison of the silver and iodine, and the determination of the faraday, 425.

W

Waidner, C. W., H. C. Dickinson, and J. J. Crowe, Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 267.

Waltenberg, R.G., G. K.Burgess and, Melting points of the refractory elements. I—Elements of atomic weight from 48 to 59, 79.

Watthour meters, American direct current, 161. Windage resistance of steam turbine wheels, 191. Working standard, Pentane lamp as a, 391. DEPARTMENT OF COMMERCE

SCIENTIFIC PAPERS

OF THE

BUREAU OF STANDARDS

S. W. STRATTON, DIRECTOR

DECENNIAL INDEX

TO THE

BULLETIN OF THE BUREAU OF STANDARDS

VOLUMES 1 TO 10, INCLUSIVE



WASHINGTON
GOVERNMENT PRINTING OFFICE
1914

STEAMARK SO INVESTEE SEE

ASSESSED OF

DECENNIAL INDEX.

[Numbers in bold face refer to volume numbers of the Bulletin.]

A

Absolute electrodynamometer, 2:33.
Absolute electrodynamometer, The Gray, 2:71.
Absolute measurement of capacity, 1:753.
Absolute measurement of electric quantity, 6:503.
Absolute measurement of inductance, 1:725.

Absolute measurement of resistance, 5:499.

Absolute standards of inductance, 2:87.

Absorption and reflection spectra, 2:457.

Absorption bands, Standard, 7:661.

Accuracy of the formulas for the ratio, regulation, and phase angle of transformers, 10:279.

Accuracy, Polarimetric sensibility and, 2:249.

Acidimetric standard, Benzoic acid as an, 8:643.

Acoustic quality, Effect of phase harmonic upon, 6:255.

Action of sunlight and air upon some lubricating oils, 7:227.

Advantages of a high spark frequency in radiotelegraphy, 5:153.

Agnew, P. G., Approximate experimental method for the analysis of EMF waves, 6:95.

——, Determination of the constants of instrument transformers, 6:281.

ment transformers, 6:281.

———, Device for measuring the torque of electrical instruments, 7:45.

—, Effect of phase harmonics upon acoustic quality, 6:255.

quality, 6:255.

Regulation of potential transformers and magnetizing current, 6:273.

----, Study of the current transformer with particular reference to iron loss, 7:423.

Tichiar reference to from loss, 1.423.

Tubular electrodynamometer for heavy currents, 8:651.

and F. B. Silsbee, Accuracy of the formulas for the ratio, regulation, and phase angle of transformers, 10:279.

Air, Action of, upon some lubricating oils, 7: 227.

Air, Simplified formula for the change in order of interference due to changes in temperature and pressure of, 9:479.

Alcohol, Ethyl, Density and thermal expansion of, and of its mixtures with water, 9:327.

Alternating-current waves, Analysis of, 9:567.

Alternating-current work, Resistance coils for, 8:495.

Alternating currents and electrical waves, Detector for small, 1:435.

American direct-current watt-hour meters, 10:161.

Ammeters, alternating current, for precision measurements, 3:43.

Ammeters, Comparison of American direct-current switchboard, 7:407.

Ammeters, High-frequency, 10:91.

Ampere, Determination of the international, in absolute measure, 8:269.

Analysis of alternating-current curves, 1:138.

Analysis of alternating-current waves, 9:567.

Analysis of EMF waves, Approximate experimental method for the, 6:95.

Anderson's method, Measurement of inductance by, using alternating currents and a vibration galvanometer, 1:291.

Antenna resistance, 9:65.

Apparatus for determination of the form of a wave of magnetic flux, 4:467.

Apparatus for the testing of transformer steel, 5:458.

Arc, Electric, Production of high-frequency oscillations from, 3:325.

Arc, On the temperature of the, 1:109.

Areas, Rectangular, Geometrical mean distances of, 3:1.

Argon, Intensities of, in relation to current and pressure, 7:49.

Artificial illuminants, Daylight efficiency of, 6:231. Atmospheric conditions in the testing of sugars, 10:537.

Atomic weight of bromine, 9:131.

Atomic weight of chlorine, 4:345.

Atomic weight of hydrogen, 4:179.

Austin, L. W., A method for producing feebly damped high-frequency electrical oscillations for laboratory measurements, 5:149.

----, Antenna resistance, 9:65.

-----, Comparative sensitiveness of some common detectors of electric oscillations, 6:527.

——, Detector for small alternating currents and electrical waves, 1:435.

———, Energy losses in some condensers used in high-frequency circuits, 9:73.

Experiments with coupled high-frequency circuits, 7:301.

——, Measurement of electrical oscillations in the receiving antenna, 7:295.

———, Platinum point electrolytic detector for electrical waves, 7:261. Austin, L. W., Quantitative experiments in longdistance radiotelegraphy, 7:315.

——, Some contact rectifiers of electric currents, 5:133.

----, The positive charges carried by the canal rays, 1:439.

——, The production of high-frequency oscillations from the electric arc, 3:325.

tions from the electric arc, 3:325.

K. E. Guthe and, Experiments on the

Ayrton-Jones absolute electro-dynamometer, 3:209.

F

Heusler magnetic alloys, 2:297.

Babcock, H. D., E. B. Rosa and, The variation of resistances with atmospheric humidity, 4:121.
Bands, Oscillatory interference, 7:131.

Bars, straight, Determination of the magnetic induction in, 6:31.

Bates, F. J., A quartz compensating polariscope with adjustable sensibility, 4:461.

—, Spectrum lines as light sources in polariscopic measurements, 2:239.

----, and F. P. Phelps, Influence of atmospheric conditions in the testing of sugars, 10:537.

-----, and J. C. Blake, The influence of basic lead acetate on the optical rotation of sucrose in water solution, 3:105.

Bates, S. J., G. W. Vinal and, Comparison of the silver and iodine voltameters and the determination of the faraday, 10:425.

Bearce, H. W., N. S. Osborne, and E. C. McKelvey, Density and thermal expansion of ethyl alcohol and of its mixtures with water, 9:327.

Behavior of high-boiling mineral oils on heating in the air, 7:365.

Benzoic acid as an acidimetric standard, 8:643.

Bessel's functions, Approximate values of, for large arguments, 5:227.

Best method of demagnetizing iron in magnetic testing, On the, 4:205.

Black body, 1:194.

Black body, Constants of spectral radiation of, 10:1. Black body, experimental, 3:165.

Blake, J. C., F. J. Bates and, The influence of basic lead acetate on the optical rotation of sucrose in water solution, 3:105.

Bleininger, A. V., Effect of preliminary heat treatment upon the drying of clays, 7:143.

Blum, William, Determination of manganese as sulphate and by the sodium bismuthate method, 8:715.

----, Hydrolysis of sodium oxalate and its influence upon the test for neutrality, 8:519.

Boiling point of sulphur, 7:127.

Bromine, Atomic weight of, 9:131.

Brooks, H. B., A deflection potentiometer for voltmeter testing, 4:275.

----, A new potentiometer for the measurement of electromotive force and current, 2:225.

Brooks, H. B., Deflection potentiometers for current and voltage measurements, 8:395.

——, Outline of design of deflection potentiometers, with notes on the design of moving-coil galvanometers, 8:419.

---, Testing potential transformers, 10:419.

----, E. P. Hyde and, Efficiency meter for electric incandescent lamps, 2:145.

Brunner comparator, 1:11.

Buckingham, Edgar, Correction for emergent stem of the mercurial thermometer, 8:239.

Deduction of Wien's displacement law, 8: 545.

Definition of the ideal gas, 6:409.

on the establishment of the thermodynamic scale of temperature by means of the constant-pressure thermometer, 3:237.

...., Steam-turbine expansion line on the Mollier diagram, and a short method of finding the reheat factor, 7:579.

----, Theory of the Hampson liquefier, 6:125.

, Windage resistance of steam turbine wheels, 10:191.

—, and J. H. Dellinger, Computation of the constant C₂ of Planck's equation, 7:393.

Burgess, George K., Estimation of the temperature of copper by means of optical pyrometers, 6:111.

———, Melting points of the iron group elements by a new radiation method, 3:345.

, Methods of obtaining cooling curves, 5:199.

—, Micropyrometer, 9:475.

----, Platinum resistance thermometry at high temperatures, 6:149.

----, Radiation from platinum at high temperatures, 1:443.

—, and J. J. Crowe, Critical ranges A₂ and A₃ of pure iron, 10:315.

----, and R. G. Waltenberg, Melting points of the refractory elements. I—Elements of atomic weight from 48 to 59, 10:79.

—, C. W. Waidner and, Constancy of the sulphur boiling point, 7:127.

—, —, On the temperature of the arc, 1:109.
—, —, Optical pyrometry, 1:189.

----, Preliminary measurements on temperature and selective radiation of incandescent lamps. 2: 310.

——, Radiation from and melting points of palladium and platinum, 3:163.

_____, ____, Temperature scale between 100° and 500° C, 7:1.

Burrows, Charles W., Determination of the magnetic induction in straight bars, 6:31.

——, On the best method of demagnetizing iron in magnetic testing, 4:205.

C

Cadmium, purification and preparation of, for standard cells, 3:626.

Cadmium sulphate, purification and preparation of, for standard cells, 3:628.

Cady, F. E., E. P. Hyde and, A comparative study of plain and frosted lamps, 4:91.

horizontal intensity of incandescent lamps, 3:357.

On the determination of the mean horizontal intensity of incandescent lamps by the rotating lamp method, 2:4rs.

Cain, John R., Determination of vanadium and chrome-vanadium steels, 7:377.

H. N. Stokes and, On sulphocyanic acid, 3:157.

of iron with special reference to the chemical reagents, 3:115.

Calcium chloride solutions between -35° C and +20° C, Specific heat of some, 6:379.

Calculation of absolute standards of inductance, Construction and, 2:87.

Calculation of mutual and self-inductance, Formulæ and tables for the, 5:1.

Calculation of self-inductance, 3:1.

Calculation of the self-inductance of single-layer coils, 2:161.

Calorimetric, New, Resistance thermometers, 9:483.

Calorimetric, New, Resistance thermometers, 9:483. Calorimetric resistance thermometers, 3:641.

Canal rays, The positive charges carried by the, 1:439.

Capacity and phase difference of paraffined paper condensers as functions of temperature and frequency, 7:495.

Capacity, Mica condensers as standards of, 6:43r. Capacity, Simultaneous measurement of, and power factor of condensers, 3:37r.

Capacity, The absolute measurement of, 1:153.

Capillary electrometer, Note on the use of, 4:525.

Carbon lamps, A tungsten comparison lamp in the photometry of, 5:555.

Carhart, Henry S., Thermodynamics of concentration cells, 7:475.

Cell, standard, The electrode equilibrium of the, 4:8r.

4:81.
Cell, Weston standard, The temperature formula of, 5:300.

Cells, A new determination of the electromotive force of Weston and Clark standard, by an absolute electrodynamometer, 2:33.

Cells, Clark and Weston standard, preliminary specifications for, 3:623.

Cells, standard, Clark and Weston, 4:1.

Charges carried by the canal rays, The positive, $1:_{439}$.

Chlorine, The atomic weight of, 4:345.

Chloroplatinic acid, The preparation of, by electrolysis of platinum black, 4:365.

Chromium, Melting point of, 3:352.

Circle and a coaxial single-layer coil, Mutual inductance of, 3:209.

Circles, On the self-inductance of, 4;149.

Circuits, Coupled, in which the secondary has distributed inductance and capacity, 6:247.

Circuits, coupled, The theory of, 5:511.

Clark and Weston standard cells, 4:1.

Clark and Weston standard cells, Preliminary specifications for, 3:623.

Clark standard cells, A new determination of the electromotive force of Weston and, by an absolute electrodynamometer, 2:33.

Climate, Effect of, on resistances, 4:135.

Clinical thermometers, The testing of, 1:275.

Cobalt, Melting point of, 3:349.

Coblentz, W. W., A vacuum radiomicrometer, 2:479.

——, Constants of spectral radiation of a uniformly heated inclosure, or so-called "black body," I, 10:-

----, Diffuse reflecting power of various substances, 9:283.

----, Instruments and methods used in radiometry, 4:391.

Instruments and methods used in radiometry, II, 9:7.

Luminous efficiency of the firefly, 6:321.

----, Note on the thermoelectric properties of tantalum and tungsten, 6:107.

Selective radiation from various solids, II, 6:301.

----, Radiation constants of metals, 5:339.

----, Radiation from various solids, 5:159.

Radiometric investigations of infra-red absorption and reflection spectra, 2:457.

——, Radiometric investigation of water of crystallization, light filters, and standard absorption bands, 7:619.

Reflecting power of various metals, 7:197.
Selective radiation from the Nernst glower.

4:533.

Selective radiation from the Nernst glower,
4:533.

Selective radiation from various substances.

III, 7:243.

, Selective radiation from various substances, IV, 9:81.

Coefficient of reflection of electrical waves at a transition point, Louis Cohen, 5:549.

Coefficient temperature of resistance of copper, 7:71.
Coffin, J. G., The influence of frequency upon the

self-inductance of coils, 2:275.

Cohen, Louis, An exact formula for the mutual

inductance of coaxial solenoids, 3:295.

Coupled circuits in which the secondary has

distributed inductance and capacity, 6:247.

, Note on the approximate values of Bessel's functions for large arguments, 5:227.

The influence of frequency on the resistance and inductance of solenoidal coils, 4:16x.

The influence of terminal apparatus on telephonic transmission, 5:231.
 The self-inductance of a solenoid of any num-

ber of layers, 4:383.

----, The theory of coupled circuits, 5:511.

——, Edward B. Rosa and, Formulæ and tables for the calculation of mutual and self-inductance, 5:1.

----, On the self-inductance of circles, 4:149.

Cohen, Louis, Edward B. Rosa and, The mutual inductance of coaxial solenoids, 3:305.

——, ——, The mutual inductance of two circular coaxial coils of rectangular sections, 2:359. Coil, coaxial single-layer, Mutual inductance of a circle and a, 3:209.

Coil, The self-inductance of a, of any length and any number of layers of wire, 4:369.

Coils, Calculation of the self-inductance of single layer, 2:161.

Coils of rectangular section, The mutual inductance of two circular coaxial, 2:359.

Coils, Revision of the formulæ of Weinstein and Stefan for the mutual inductance of coaxial, 2:331.

Coils, The influence of frequency upon the self-inductance of, 2:275.

Cold-junction, Note on, corrections for thermocouples, 9:553.

Color, Pure, Method for constructing the natural scale of, 6:89.

Colorimeter for determination of iron, 3:121.

Colorimeter, New precision, 9:1.

Colorimetric determination of iron with special reference to chemical reagents, 3:115.

Commercial copper, Electrical conductivity of, 7:103.

Comparative sensitiveness of some common detectors of electric oscillations, 6:527.

Comparative study of American direct current watthour meters, 10:161.

Comparative study of plain and frosted lamps, 4:91.

Comparison lamp, Tungsten, in the photometry of carbon lamps, 5:555.

Comparison of American direct-current switchboard voltmeters and ammeters, 7:407.

Comparison of the silver and iodine voltameters and the determination of the faraday, 10:425.

Comparison of the unit of luminous intensity of the United States with those of Germany, England, and France, 3:65.

Comparison of the various methods of determining the ratio of the electromagnetic to the electrostatic unit of electricity, 3:605.

Compensating polariscope, Quartz, with adjustable sensibility, 5:193.

Computation of the constant C_2 of Planck's equation, 7:393.

Concentration cells, Thermodynamics of, 7:475. Condensers and circuits of low power factor. Watt-

meter methods of measuring power expended upon, 1:383.

Condensers, Mica, as standards of capacity, 6:431. Condensers, Simultaneous measurement of the capacity and power factor of, 3:371.

Condensers used in high-frequency circuits, Energy losses in some, 9:73.

Conductivity, Electrical, of commercial copper, 7:103.

Conductors, linear, The self and mutual inductance of, 4:301.

Constancy of the sulphur boiling point, 7:127.

Constant C2 of Planck's equation, computation of, 7:393.

Constant-pressure thermometer, Establishment of thermodynamic scale of temperature by means of, 3:237.

Constants of spectral radiation of a uniformly heated inclosure, I, 10:1.

Construction and calculation of absolute standards of inductance, 2:87.

Contact rectifiers of electric currents, 5:133.

Converging lenses, A new method of determining the focal length of, 5:483.

Cooling, curves, Methods of obtaining, 5:199.

Copper, Electrical conductivity of commercial, 7:103.

Copper, Estimation of the temperature of, by means of optical pyrometers, 6:111.

Copper, Temperature coefficient of resistance of, 7:71.

Corrections for thermocouples, Note on cold-junction, 9:553.

Corresponding states, application of the law of, 3:258.

Coulometer, The silver (see also Voltameter), 1:349. Coupled circuits, The theory of, 5:511.

Crehore, Albert C., George O. Squire and, Oscillatory interference bands and some practical applications, 7:131.

Critical ranges A2 and A3 of pure iron, 10:315.

Crittenden, E. C., and A. H. Taylor, Pentane lamp as a working standard, 10:391.

---- E. B. Rosa and, Flame standards in photometry, 10:557.

Crowe, J. J., G. K. Burgess and, Critical ranges A2 and A3 of pure iron, 10:315.

H. C. Dickinson, C. W. Waidner and, Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 10:267.

Crystallization, Radiometric investigation of water of, 7:619.

Current, A new potentiometer for the measurement of electromotive force and, 2:225.

Current, Magnetizing, Regulation of potential transformers and, 6:273.

Current waves, Alternating, Analysis of, 9:567.

Currents, Electric, Some contact rectifiers of, 5:133. Curtis, Harvey L., Mica condensers as standards of capacity, 6:431.

----, Frederick W. Grover and, Measurement of the inductances of resistance coils, 8:455.

Resistance coils for alternating-current work, 8:495.

Curves, cooling, Methods of obtaining, 5:199.

D

Daylight efficiency of artificial illuminants, 6:231. Deduction of Wien's displacement law, 8:545. Dellinger, J. H., Temperature coefficient of resistance of copper, 7:71.

----, High-frequency ammeters, 10:91.

Dellinger, J. H., Edgar Buckingham and, Computation of the constant C2 of Planck's equation, 7:393.

., F. A. Wolff and, Electrical conductivity of commercial copper, 7:103.

Definition of the ideal gas, 6:400.

Deflection potentiometer, 2:228.

Deflection potentiometer for voltmeter testing, A. 4:275.

Deflection potentiometers for current and voltage measurements, 8:305.

Demagnetizing iron in magnetic testing, On the best method of, 4:205.

Density and thermal expansion of ethyl alcohol and of its mixtures with water, 9:327.

Dependence of magnetic hysteresis upon wave form, 5:381.

Detector for electrical waves, On the platinum point electrolytic, 2:261.

Detector for small alternating currents and electrical waves, 1:435.

Detectors of electric oscillations, Comparative sensitiveness of, 6:527.

Determination, A new, of the ratio of the electromagnetic to the electrostatic unit of electricity,

Determination, Colorimetric, of iron with special reference to chemical reagents, 3:115.

Determination of manganese as sulphate and by the sodium bismuthate method, 8:715.

Determination of the constants of instrument transformers, 6:281.

Determination of the electromotive force of Weston and Clark standard cells by an absolute electrodynamometer, A new, 2:33.

Determination of the international ampere in absolute measure, 8:269.

Determination of the magnetic induction in straight bars, 6:31.

Determination of the mean horizontal intensity of incandescent lamps, 3:357.

Determination of the mean horizontal intensity of incandescent lamps by the rotating lamp method, On the, 2:415.

Determination of the ratio of transformation and of the phase relations in transformers, 6:1.

Determination of total sulphur in india rubber, 8:445.

Determination of vanadium in vanadium and chrome-vanadium steels, 7:377.

Device for measuring the torque of electrical instruments, 7:45.

Dickinson, H. C., Heat treatment of high-temperature mercurial thermometers, 2:189.

-, Specific heat of some calcium chloride solu-

tions between -35° C. and +20° C. 6:379.

—, and E. F. Mueller, Calorimetric resistance thermometers and the transition temperature of sodium sulphate, 3:641.

-, ----, New calorimetric resistance thermometers, 9:483.

Dickinson, J. H., C. W. Waidner and, On the stand ard scale of temperature in the interval o° to 100° C., 3:663.

-, --, J. J. Crowe, Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 10:267.

-, D. R. Harber, and N. S. Osborne, Latent heat of fusion of ice, 10:235.

Diffuse reflecting power of various substances, 9:283. Direct-current voltmeters and ammeters, Comparison of American, 7:407.

Dorsey, N. E., E. B. Rosa and, A new determination of the electromagnetic to the electrostatic unit of electricity, 3:438.

-, A comparison of the various methods of determining the ratio of the electromagnetic to the electrostatic unit of electricity, 3:605.

-, E. B. Rosa, and J. M. Miller, Determination of the international ampere in absolute measure, 8:269.

Drying of clays, Effect of preliminary heat treatment upon, 7:143.

E

Effect of phase harmonics upon acoustic quality, 6:255.

Effect of preliminary heat treatment upon the drying of clays, 7:143.

Effect of wave form upon the iron losses in transformers, 4:477.

Efficiency Luminous, of the firefly, 6:321.

Efficiency meter for electric incandescent lamps, 2:145.

Elastic properties, On fibers resembling quartz in their, 1:101.

Electrical conductivity of commercial copper, 7:103.

Electrical instruments, Device for measuring the torque of 7:45.

Electrical oscillations, feebly damped, high frequency. A method for producing for laboratory measurements, 5:149.

Electrical oscillations, Measurement of, in the receiving antenna, 7:295.

Electrical units, fundamental, to be proposed for international adoption, The principles involved in the selection and definition of, 5:243.

Electrical units, The so-called international, 1:39.

Electrical waves, Detector for small alternating currents and, 1:435.

Electrical waves, On the platinum point electrolytic detector for, 2:261.

Electric arc, Production of high-frequency oscillations from, 3:325.

Electric currents, Some contact rectifiers of, 5:133. Electric furnace, Production of temperature uniformity in, 10:451.

Electric oscillations, Comparative sensitiveness of some common detectors of, 6:527.

Electric quantity, Method for the absolute measurement of, 6:503.

Electrical waves, The coefficient of reflection of, at a transition point, 5:549.

Electricity, ratio of the electromagnetic to the electrostatic unit of, A new determination of the, 3:438.

Electricity, ratio of the electromagnetic to the electrostatic unit of, Comparison of the various methods of determining the, 3:605.

Electrochemical equivalent of silver, 1:34.

Electrochemical equivalent of silver, 2:70.

Electrode equilibrium of the standard cell, The, 4:81.

Electrodynamometer, A new determination of the electromotive force of Weston and Clark standard cells by an absolute, 2:33.

Electrodynamometer, A tubular, for heavy currents, 8:651.

Electrodynamometer, The Ayrton-Jones absolute, 3:209.

Electrodynamometer, The compensated two-circuit, 3:43.

Electrodynamometer, The Gray absolute, 2:71.

Electrolysis of platinum black, The preparation of chloroplatinic acid by, 4:365.

Electrolytic detector for electrical waves, On the platinum point, 2:261.

Electrometer, capillary, Note on the use of, with alternating voltages, 4:525.

Electromotive force and current, A new potentiometer, for the measurement of, 2:225.

Electromotive force of Weston and Clark standard cells by an absolute electrodynamometer, A new determination of the, 2:33.

Elements, Melting points of the refractory, 10:79. Emission spectra of solids on Nernst "Heater tube," 5:171.

Emissivity, Relation between, and energy consumption, 5:178.

Energy consumption, Relation between emissivity and, 5:178.

Energy losses in some condensers used in high-frequency circuits, 9:73.

Errors in magnetic testing with ring specimens, 5:435.

Establishment of the thermodynamic scale of temperature by means of the constant-pressure thermometer, 3:237.

Estimation of the temperature of copper by means of optical pyrometers, 6:111.

Ethyl alcohol, Density and thermal expansion of, and of its mixtures with water, 9:327.

Expansion of ethyl alcohol, Density and thermal, and of its mixtures with water, 9:327.

Experiments on the Heusler magnetic alloys, 2:297. Experiments with coupled high-frequency circuits, 7:301.

F

Faraday, Determination of the, 10:425. Fechner's law, Complete form of, 3:59.

Feebly damped high-frequency electrical oscillations for laboratory measurements, A method for producing, 5:149.

Féry pyrometer, 1:224-238.

Fibers resembling quartz in their elastic properties, 1:101.

Firefly, Luminous efficiency of the, 6:321.

Fischer, L. A., History of standard weights and measures of United States, 1:365.

——, Recomparison of the United States prototype meter, 1:5.

----, C. W. Waidner and, The testing of clinical thermometers, 1:275.

Fisher, J. V. S., M. G. Lloyd and, Apparatus for determination of the form of a wave of magnetic flux, 4:467.

The testing of transformer steel, 5:453.

Fitch, T. T., Determination of the constants of instrument transformers, 6:281.

and C. J. Huber, Comparative study of American direct current watt-hour meters, 10:161.

——, Comparison of American direct-current switchboard voltmeters and ammeters, 7:407. Five-thousand volt generator set, 1:449.

Flame standards in photometry, 10:557.

Flux density, Variation of exponents with, Tables, 5:469-471.

Focal length of converging lenses, A new method for determining the, 5:483.

Foote, P. D., Note on cold-junction corrections for thermocouples, 9:553.

Form of wave of magnetic flux, Apparatus for determination of a, 4:467.

Formula, An exact, for the mutual inductance of coaxial solenoids, 3:295.

Formula, Simplified, for the change in temperature

and pressure of air, 9:479.
Formula, Temperature, of the Weston standard

cell, 5:309.

Formulæ and tables for the calculation of mutual and self-inductance, 5:1.

Formulæ of Weinstein and Stefan for the mutual inductance of coaxial coils, Revision of the, 2:331.

Formulas and tables for the calculation of mutual and self-inductance (revised), 8:r.

Formulas for the ratio, regulation, and phase angle of transformers, Accuracy of the, 10:279.

Four-terminal conductor and the Thomson bridge, 8:559.

Frequency, Capacity and phase difference of paraffined paper condensers as functions of temperature and, 7:495.

Frequency, The influence of, on the resistance and inductance of solenoidal coils, 4:161.

Frequency upon the self-inductance of coils, The influence of, 2:275.

Frosted lamps, An explanation of the short life of, 3:341.

Function of a periodic variable given by the steady reading of an instrument; with a note on the use of the capillary electrometer with alternating voltages, 4:525.

Functions, Bessel's, Approximate values of, for large arguments, 5:227.

Fusion of ice, Latent heat of, 10:235.

G

Galvanometer, vibration, Measurement of inductance by Anderson's method, using alternating currents and a, 1:291.

Galvanometer, vibration, Theoretical and experimental study of the, 6:347.

Gas and metal spectra from electrically conducting gases, The relative intensities of, 1:399.

Gas, ideal, definition of the, 6:409.

Gases, The relative intensities of metal and gas spectra from electrically conducting, 1:399.

Gases, The spectra of mixed, 1:77.

Gases, Some new rectifying effects in conducting, 1:95.

Generator set, A 5000-volt, 1:449.

George, E. B., Specific heat of some calcium chloride solutions between -35° C and +20° C, 6:379.

Glass volumetric apparatus, The testing of, 4:553.

Graphite arc, Experiments with the, 3:329. Gray absolute electrodynamometer, The, 2:71,

Gray absolute electrodynamometer, The, 2:71. Gray, A. W., Micrometer microscopes, 10:375.

Production of temperature uniformity in an electric furnace, 10:451.

Gray electro-dynamometer, Equation for, 3:224. Grover, F. W., Analysis of alternating-current waves, 9:567.

——, Capacity and phase difference of paraffined paper condensers as functions of temperature and frequency, 7:495.

— Mutual inductance of two parallel coaxial circles in terms of hypergeometrical series, 6:,89, — Resistance coils for alternating-current work, 8:495.

and power factor of condensers, 3:371.

, E. B. Rosa and, Formulas and tables for the calculation of mutual and self-inductances (revised), 8:1.

derson's method, using alternating currents and a vibration galvanometer, 1:291.

ity, 1:153.

, The absolute measurement of inductance, 1:125.

, ..., Use of serpentine in standards of inductance, 1:337.

----, and H. L. Curtis, Measurement of the inductances of resistance coils, 8:455.

Guihe, K. E., A new determination of the electromotive force of Weston and Clark standard cells by an absolute electrodynamometer, 2:33.

_____, A study of the silver voltameter, 1:21.

——, and L. W. Austin, Experiments on the Heusler magnetic alloys, 2:297.

---, On fibers resembling quartz in their elastic properties, 1:101.

_____, _____, The silver coulometer, 1:349.

H

Hampson liquefier, Theory of the, 1:125.

Harmonics, phase, Effect of upon acoustic quality, 6:255.

Harper, D. R., Thermometric lag, 8:659.

----, H. C. Dickinson, and N. S. Osborne, Latent heat of fusion of ice, 10:235.

Heat, Specific, of some calcium chloride solutions between -35° C and $+20^{\circ}$ C, **6**:379.

Heat treatment, Effect of, upon the drying of clays, 7:143.

Heat treatment of high-temperature mercurial thermometers, 2:189.

Heated inclosure, Uniformly, Constants of spectral radiation of a, 10:r.

Height, Note on the setting of a mercury surface to surface to a, 10:371.

Helium gas, electrically conducting, Luminous properties of, 8:487.

Helium gas, electrically conducting, The luminous properties of, 4:511.

Helium lines, Intensities of, 7:49.

Hemispherical intensities, mean spherical and, On the theory of the Matthews and the Russell-Léonard photometers for the measurement of, 1:255.

Heusler, magnetic alloys, Experiments on the, 2:297.

High-frequency ammeters, 10:91.

High-frequency circuits, Energy losses in some condensers used in, 9:73.

High-frequency circuits, Experiments with coupled. 7:301.

High frequency, feebly damped, electrical oscillations for laboratory measurements, A method for producing, 5:149.

High spark frequency, Advantages of, in radiotelegraphy, 5:153.

High-temperature mercurial thermometers, Heat treatment of, 2:189.

High temperatures, Platinum resistance thermometry at, 6:149.

High temperatures, Radiation from platinum at,

1:443.

History of standard weights and measures of United States, 1:365.

Holborn-Kurlbaum pyrometer, 1:233.

Horizontal intensity of incandescent lamps by the rotating lamp method, On the determination of the mean, 2:415.

Huber, C. J., T. T. Fitch and, Comparative study of American direct current watt-hour meters, 10:161.

—, Comparison of American directcurrent switchboard voltmeters and ammeters, 7:407.

Humidity, atmospheric, The variation of resistances with, 4:121.

Hydrogen lines, Intensities of, 7:49.

Hydrogen scale of temperature, 1:278.

Hydrogen, The atomic weight of, 4:179.

Hydrolysis of sodium oxalate and its influence upon the test for neutrality, 8:519.

Hypergeometrical series, Mutual inductance of two parallel coaxial circles in terms of, 6:489.

Hysteresis, magnetic, Dependence of, upon wave form, 5:381.

Hyde, E. P., A comparison of the unit of luminous intensity of the United States with those of Germany, England, and France, 3:65.

----, An explanation of the short life of frosted lamps, 3:341.

----, Geometrical theory of radiating surfaces with discussion of light tubes, 3:81.

On the theory of the Matthews and the Russell-Léonard photometers for the measurement of mean spherical and mean hemispherical intensities, 1:255.

——, Talbot's law as applied to the rotating sectored disk, 2:1.

The use of white walls in a photometric laboratory, 1;417.

----, and F. E. Cady, A comparative study of plain and frosted lamps, 4:91.

——, ——, On the determination of the mean horizontal intensity of incandescent lamps, 3:357.
——, ——, On the determination of the mean horizontal intensity of incandescent lamps by the rotating lamp method, 2:415.

----, and H. B. Brooks, An efficiency meter for electric incandescent lamps, 2:145.

Ι

Ice, Latent heat of fusion of, 10:235.

Ice point changes, 2:206.

Ice point, Thermodynamic temperature of the 3:269.

Icebergs, Observations on ocean temperatures in the vicinity of, 10:267.

Ideal gas, Definition of the, 6:409.

Illuminants, artificial, Daylight efficiency of, 6:231. Incandescent lamps, Determination of the mean horizontal intensity of, 3:357.

Incandescent lamps, On the determination of the mean horizontal intensity of, by the rotating lamp method, 2:415.

Incandescent lamps, Preliminary measurements on temperature and selective radiation of, 2:319.

Inductance, Construction and calculation of absolute standards of, 2:87.

Inductance, Mutual and self-, Formulas and tables for the calculation of, 8:1.

Inductance, Mutual, of two parallel coaxial circles in terms of hypergeometrical series, 6:489.

Inductance of coaxial coils, Revision of the formulæ of Weinstein and Stefan for the mutual, 2:331.

Inductance of solenoidal coils, The influence of frequency on the resistance and, 4:161.

Inductance of two circular coaxial coils of rectangular section, The mutual, 2:359.

Inductance, Self-, and mutual, Formulæ and tables for the calculation of, 5:r.

Inductance, Self and mutual, of linear conductors, 4:301.

Inductance standards, mutual, Different forms of, 5:507.

Inductances of resistance coils, Measurement of the, 8:455.

Induction, Magnetic, in straight bars, Determination of the, 6:31.

Influence of atmospheric conditions in the testing of sugars, 10:537.

Influence of basic lead acetate on the optical rotation of sucrose in water solution, 3:105.

Influence of frequency on the resistance and inductance of solenoidal coils, The, 4:161.

Influence of frequency upon the self-inductance of coils, 2:275.

Influence of terminal apparatus on telephonic

Influence of terminal apparatus on telephonic transmission, 5:231.

Influence of wave form on the rate of integrating induction wattmeters, 1:421.

Infra-red absorption and reflection spectra, Radiometric investigations of, 2:457.

Instruments and methods used in radiometry, 4:391.

Instruments and methods used in radiometry—II, 9:7.

Instrument transformers, Determination of the constants of, 6:281.

Integrating induction wattmeters, Influence of wave form on the rate of, 1:421.

Intensity of incandescent lamps by the rotating lamp method, On the determination of the mean horizontal, 2:415.

Intensity of monochromatic light sources, Purity and, 2:439.

Intensities of some hydrogen, argon, and helium lines in relation to current and pressure, 7:49.

Interference bands, Oscillatory, and practical applications, 7:131.

Interference, Simplified formula for the change in order of, Due to changes in temperature and pressure of air, 9:479.

International adoption of electrical units, Principles involved in, 5:243.

International electrical units, The so-called, 1:39.

Iron, colorimetric determination of, with special reference to chemical reagents, 3:115.

Iron group elements, Melting points of the, by a new radiation method, 3:345.

Iron loss, Study of the current transformer with reference to, 7:423.

Iron losses in transformers, Effect of wave form upon the, 4:477.

Iron, Melting point of, 3:348.

Iron, On the best method of demagnetizing, in magnetic testing, 4:205.

Iron, Pure, Critical ranges A2 and A3 of, 10:315.

Ives, Herbert E., Daylight efficiency o artificial illuminants, 6:231.

Ives, Herbert E., Luminous efficiency of the firefly, 6:321.

----, White light from the mercury ar and its complementary, 6:265.

----, and L. R. Woodhull, A tungsten comparison lamp in the photometry of carbon lamps, 5:555.

K

Kanolt C. W., Melting points of some refractory oxides, 10:205.

L

Laboratory, photometric, The use of white walls in a, 1:417.

Lamp, Pentane, as a working standard, 10:391.

Lamp, tungsten comparison, in the photometry of carbon lamps, 5:555.

Lamps, An efficiency meter for electric incandescent, 2:145.

Lamps, An explanation of the short life of frosted, 3:341.

Lamps, carbon, A tungsten comparison lamp in the photometry of, 5:555.

Lamps, Determination of the mean horizontal intensity of incandescent, 3:357.

Lamps, On the determination of the mean horizontal intensity of incandescent, by the rotating lamp method. 2:415.

Lamps, plain and frosted, A comparative study of, 4:91.

Lamps, Preliminary measurements on temperature and selective radiation of incandescent, 2:319.

Latent heat of fusion of ice, 10:235.

Lava fibers, 1:102.

Lead acetate, Influence of basic, on the optical rotation of sucrose in water solution, 3:105.

Le Chatelier pyrometer, 1:214.

Legal definitions of electrical units: Austria, 74; Belgium, 76; Canada, 69; France, 75; Germany, 72; Great Britain, 65; Switzerland, 76; United States, 1:61.

Lenses, Converging, A new method of determining the focal length of, 5:483.

Light filters, Radiometric investigation of, 7:655.

Light sources in polariscope measurements, Spectrum lines as, 2:239.

Light sources, Purity and intensity of monochromatic, 2:439.

Light tubes, Discussion of, 3:81.

Light, White, from the mercury arc and its complementary, 6:265.

Liquefier, Hampson, Theory of the, 6:125.

Lloyd, Morton G., Dependence of magnetic hysteresis upon wave form, 5:381.

and of the phase relations in transformers, 6:r.

—, Effect of phase harmonics upon acoustic quality, 6:255.

----, Effect of wave form upon the iron losses in transformers, 4:477.

Lloyd, Morton G., Errors in magnetic testing of ring specimens, 5:435.

——, Function of a periodic variable given by the steady reading of an instrument; with a note on the use of the capillary electrometer with alternating voltages, 4:525.

, Regulation of potential transformers and

magnetizing current, 6:273.

and J. V. S. Fisher, Apparatus for determination of the form of a wave of magnetic flux, 4:467.

_____, The testing of transformer steel, 5:453.

E. B. Rosa, and C. E. Reid, Influence of wave form on the rate of integrating induction wattmeters, 1:421.

Lorenz apparatus and Ayrton-Jones absolute electro-dynamometer, 3:209.

Low power factor, Wattmeter methods of measuring power expended upon condensers and circuits of, 1:383.

Lubricating oils, Action of sunlight and air upon, 7:227.

Luminosity and temperature, 6:337.

Luminous efficiency of the firefly, 6:321.

Luminous equivalent of radiation, 5:261.

Luminous properties of electrically conducting helium gas, The, 4:511.

Luminous properties of electrically conducting helium gas. II. Reproducibility, 8:487.

M

Magnetic alloys, Experiments on the Heusler, 2:297.

Magnetic flux, Apparatus for determination of the form of wave of, 4:467.

Magnetic hysteresis, Dependence of, upon wave form, 5:381.

Magnetic testing, Errors in, with ring specimens, 5:435.

Magnetic testing, On the best method of demagnetizing iron in, 4:205.

Magnetizing current, Regulation of potential transformers and, 6:273.

Manganese as sulphate and by the sodium bismuthate method, Determination of, 8:715.

Manganese, Melting point of, 3:352.

Matthews and the Russell-Léonard photometers for the measurement of mean spherical and mean hemispherical intensities, On the theory of the, 1:255.

McBride, R. S., Standardization of potassium permanganate solution by sodium oxalate, 8:611.

McCollum, Burton, Method for the absolute measurement of electric quantity, 6:503.

McDaniel, A. S., G. W. Vinal, E. B. Rosa and, Silver voltameter—Part I. First series of quantitative experiments, 9:151.

——, ——, Silver voltameter—Part II.

The chemistry of the filter-paper voltameter and the explanation of striations, 9:211.

McDaniel, A.S., G.W. Vinal,, E. B. Rosa and Silver voltameter—Part III. Second series of quantitative experiments and the preparation and testing of silver nitrate, 9:493.

Third series of quantitative experiments and special investigations, 10:475.

McKelvy, E. C., N. S. Osborne, and H. W. Bearce, Density and thermal expansion of ethyl alcohol and of its mixtures with water, 9:327.

Mean distances, Geometrical, of rectangular areas and the calculation of self-inductance, 3:1.

Mean horizontal intensity of incandescent lamps, On the determination of the, \$:357.

Mean spherical and mean hemispherical intensities, On the theory of the Matthews and the Russell-Léonard photometers for the measurement of, 1:255.

Mesuré and Nouel's pyrometric telescope, 1:225. Measurement, absolute, of resistance, A new

method for the, 5:499.

Measurement of capacity, The absolute, 1:153, Measurement of electrical oscillations in the receiving antenna, 7:295.

Measurement of electromotive force and current, A new potentiometer for the, 2:225.

Measurement of frequency, 1:144.

Measurement of inductance by Anderson's method, using alternating currents and a vibration galvanometer, 1:291.

Measurement of inductance, The absolute, 1:125.

Measurement of the inductances of resistance coils,

Measurement, Simultaneous, of the capacity and power factor of condensers, 3:371.

Measurements on temperature and selective radiation of incandescent lamps, 2:319.

Measuring power expended upon condensers and circuits of low power factor, Wattmeter methods of, 1:383.

Melting points of palladium and platinum, Radiation from and, 3:163.

Melting points of some refractory oxides, 10:295. Melting points of the iron group elements by a new radiation method, 3:345.

Melting points of the refractory elements, 10:79. Mercurial thermometry, 3:667.

Mercury arc and its complementary, White light from the. 6:265.

Mercury, Purification and preparation of, for standard cells, 3:624.

Mercury surface, Note on the setting of a, to a required height, 10:371.

Metal and gas spectra from electrically conducting gases, The relative intensities of, 1:399.

Metals, Radiation constants of, 5:339.

Metals, Reflecting power of, 7:197.

Meter for electric incandescent lamps, An efficiency, $2:_{145}$.

Meter, United States prototype, Recomparison of the, 1:5.

Meter, watts-per-candle, A volt scale for, 5:543. Metric system, 1:373.

Method for constructing the natural scale of pure color, 6:89.

Method for producing feebly damped high frequency electrical oscillations for laboratory measurements, 5:149.

Method for the absolute measurement of electric quantity, 6:503.

Method for the determination of relative wave lengths, 6:573.

Method, New, of determining the focal length of converging lenses, 5:483.

Methods of obtaining cooling curves, 5:199.

Methods used in radiometry—II, Instruments and, 9:7.

Mica condensers as standards of capacity, 6:431.

Micrometer microscopes, 10:375.

Micropyrometer, 9:475.
Microscopes, micrometer, 10:375.

Middlekauff, George W., Direct reading candlepower scale and recording device for precision photometers, 7:11.

Miller, J. M., N. E. Dorsey, E. B. Rosa and, Determination of the international ampere in absolute measure, 8:269.

Mixed gases, The spectra of, 1:77.

Mixtures with water, Density and thermal expansion of ethyl alcohol and of its, 9:327.

Modified form of stability test for smokeless powder and similar materials, 9:119.

Mollier diagram, Steam-turbine expansion line on, 7:579.

Monochromatic light sources, Purity and intensity of, 2:439.

Morey, G. W., Benzoic acid as an acidimetric standard, 8:643.

Morse thermo-gage, 1:237.

Mueller, E. F., Specific heat of some calcium chloride solutions between -35° C and $+20^{\circ}$ C, 6:379.

——, H. C. Dickinson and, Calorimetric resistance thermometers and the transition temperature of sodium sulphate, 3:64r.

, ..., New calorimetric resistance thermometers, 9:483.

Mutual and self-inductance, Formulæ and tables for the calculation of, 5:1.

Mutual inductance of a circle and a coaxial singlelayer coil, 3:209.

Mutual inductance of coaxial coils, Revision of the formulæ of Weinstein and Stefan for the, 2:331. Mutual inductance of coaxial solenoids, 3:305.

Mutual inductance of coaxial solenoids, An exact

formula for the, 3:295.

Mutual inductance of two circular coaxial coils of

rectangular section, 2:359.

Mutual inductance of two parallel coaxial circles in terms of hypergeometrical series, 6:489.

N

Neon, Wave lengths of, 8:539.

Nernst glower, Selective radiation from the, 4:533. New calorimetric resistance thermometers, 9:483.

New method for the absolute measurement of resistence, 5:499.

New method of determining the focal length of converging lenses, 5:483.

New precision calorimeter, 9:1.

Nickel, Melting point of, 3:351.

Nomenclature, Photometric units, and, 6:543.

Note on cold-junction corrections for thermocouples, $9:_{553}$.

Note on the approximate values of Bessel's functions for large arguments, 5:227.

Note on the thermoelectric properties of tantalum and tungsten, 6:107.

Noyes, W. A., The atomic weight of hydrogen, 4: 179.

----, and H. C. P. Weber, The atomic weight of chlorine, 4:345.

Nutting, P. G., A pocket spectrophotometer, 2:317.

_____, A 5000-volt generator set, 1:449.

Complete form of Fechner's law, 3:59.

----, Luminosity and temperature, 6:337.
----, Luminous properties of electrically conduct-

ing helium gas. II. Reproducibility, 8:487.

———, Method of constructing the natural scale of pure color, 6:89.

----, New precision colorimeter, 9:1.

——, On secondary spectra and the conditions under which they may be produced, 1:33.

Photometric attachment for spectroscopes, 7:239.

-----, Polarimetric sensibility and accuracy, 2:249.
-----, Purity and intensity of monochromatic light

sources, 2:439.

-----, Resolving powers of objectives, 6:121.
------, Some new rectifying effects in conducting

gases, 1:95.

The luminous equivalent of radiation, 5:261.

The luminous properties of electrically con-

ducting helium gas, 4:511.

The relative intensities of metal and gas

spectra from electrically conducting gases, 1:399.

The spectra of mixed gases, 1:77.

Visibility of radiation. Recalculation of

——, Visibility of radiation. Recalculation of König's date, 7:235.

——, and Orin Tugman, Intensities of some hydrogen, argon, and helium lines in relation to current and pressure, 7:49.

O

Objectives, Resolving powers of, 6:121.

Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 10:267. Ocean temperatures. Observations on, 10:267.

Oils, Action of sunlight and air upon lubricating, 7:227.

Oils, Behavior of high-boiling mineral, on heating in the air, 7:365.

Optical pyrometers, Estimation of the temperature of copper by means of, 6:111.

Optical pyrometry, 1:189.

Osborne, N. S., and B. H. Veazey, The testing of glass volumetric apparatus, 4:553.

, D. R. Harper, H. C. Dickinson and, Latent heat of fusion of ice, 10:235.

——, E. C. McKelvy, and H. W. Bearce, Density and thermal expansion of ethyl alcohol and of its mixtures with water, 9:327.

Oscillations, Electrical, A method for producing feebly damped high frequency, for laboratory measurements, 5:149.

Oscillations, Electric, Comparative sensitiveness of some common detectors of, 6:527.

Oscillations from the electric arc, Production of high frequency, 3:325.

Oscillatory interference bands and some practical applications, 7:131.

Outline of design of deflection potentiometers, with notes on the design of moving-coil galvanometers, 8:419.

Oxides, Refractory, Melting points of some, 10:295.

P

Palladium and platinum, Radiation from and melting points of, 3:163.

Paper condensers, paraffined, Capacity and phase difference of, 7:495.

Paschen's method of equal ordinates, Computation of the constant C₂ of Planck's equation by an extension of, 7:393.

Pentane lamp as a working standard, 10:391.

Periodic variable, Function of a, given by the steady reading of an instrument; with a note on the use of the capillary electrometer with alternating voltages, 4:525.

Phase angle of transformers, 10:279.

Phase difference of paraffined paper condensers, 7:495.

Phelps, F. P., F. J. Bates and, Influence of atmospheric conditions in the testing of sugars, 10:537.
Photometers for the measurement of mean spherical and mean hemispherical intensities, On the theory of the Matthews and the Russell-Léonard, 1:255.

Photometric attachment for spectroscopes, 7:239. Photometric laboratory, The use of white walls in a, 1:417.

Photometric units and nomenclature, 6:543.

Photometry, Flame standards in, 10:557.

Photometry of carbon lamps, A tungsten comparison lamp in the, 5:555.

Planck's equation, Computation of the constant C₂ of, 7:393.

Platinum black, The preparation of chloroplatinic acid by the electrolysis of, 4:365.

Platinum, palladium and, Radiation from and melting points of, 3:163.

Platinum point electrolytic detector for electrical waves, 2:261.

Platinum, Radiation from, at high temperatures, 1:433.

Platinum resistance thermometry at high temperatures, 6:149.

Pocket spectrophotometer, 2:317.

Point, boiling, Constancy of the sulphur, 7:127.

Polarimetric sensibility and accuracy, 2:249.

Polariscope, A quartz compensating, with adjustable sensibility, 4:461.

Polariscope, Quartz compensating, with adjustable sensibility, 5:193.

Polariscopic measurements, Spectrum lines as light sources in, 2:239.

Porous-plug experiment, Theory of the, 3:243.

Positive charges carried by the canal rays, 1:439.

Potassium permanganate solution by sodium oxalate, Standardization of, 8:611.

Potential transformers and magnetizing current, Regulation of, 6:273.

Potential transformers, Testing, 10:419.

Potentiometer, deflection, for voltmeter testing, 4:275.

Potentiometer for the measurement of electromotive force and current, A new, 2:225.

Potentiometers, Deflection, for current and voltage measurements, 8:395.

Potentiometers, Outline of design of deflection, with notes on the design of moving-coil galvanometers, 8:419.

Powder, smokeless, Modified form of stability test for, and similar materials, 9:119.

Power expended upon condensers and circuits of low power factor, Wattmeter methods of measuring, 1:383.

Power factor of condensers, Simultaneous measurement of the capacity and 3:371.

Practical applications, Oscillatory interference bands, 7:131.

Precision, colorimeter, 9:1.

Preliminary heat treatment, Effect of, upon the drying of clays, 7:143.

Preliminary measurements on temperature and selective radiation of incandescent lamps, 2:319.

Preparation of chloroplatinic acid by electrolysis of platinum black, 4:365.

Pressure of air, Interference due to changes in temperature and, Simplified formula for the change in order of, 9:479.

Priest, Irwin G., A new method of determining the focal length of converging lenses, 5:483.

——, Modified method for the determination of relative wave lengths, 6:573.

—, Simplified formula for the change in order of interference due to changes in temperature and pressure of air, 9:479.

, Wave lengths of neon, 8:539.

Principles involved in the selection and definition of the fundamental electrical units to be proposed for international adoption, 5:243.

Production of temperature uniformity in an electric furnace, 10:451.

Prototype meter, United States, Recomparsion of the, 1:5.

Pure color, Method of constructing the natural scale of, 6:89.

Purity and intensity of monochromatic light sources, 2:439.

Pyrometers, optical, Estimation of the temperature of copper by means of, 6:111.

Pyrometry, Optical, 1:189.

Q

Quality, acoustic, Effect of phase harmonics upon, 6:255.

Quantitative experiments in long-distance radiotelegraphy, 7:315.

Quantity, electric, Method for the absolute meas-

quantity, electric, method for the absolute measurement of, 6:503.

Quartz compensating polariscope with adjustable sensibility, 5:193.

Quartz compensating polariscope with adjustable sensibility, A, 4:461.

Quartz, On fibers resembling, in their elastic properties, 1:101.

ĸ

Radiating surfaces, Geometrical theory of, 3:81.

Radiation constants of metals, 5:339.

Radiation, Constants of spectral, of a uniformly heated inclosure, 10:r.

Radiation from and melting points of palladium and platinum, 3:163.

Radiation from electrically heated solids, 5:162.

Radiation from platinum at high temperatures, 1:443.

Radiation method, Melting points of the iron group elements by a new, 3:345.

Radiation of incandescent lamps, Preliminary measurements on temperature and selective, 2:319.

Radiation, Selective, from the Nernst glower, 4:533. Radiation, Selective, from various solids, 5:159.

Radiation, Selective, from various solids, II, 6:301. Radiation, Selective, from various substances, III, 7:243.

Radiation, Selective, from various substances, IV, 9:81.

Radiation, The luminious equivalent of, 5:261.

Radiation, Visibility of, 7:235.

Radiometric investigation of water of crystallization light filters, and standard absorption bands, 7:619.

Radiometric investigations of infra-red absorption and reflection spectra, 2:457.

Radiometry, Instruments and methods used in, 4:391.

Radiometry—II, Instruments and methods used in, 9:7.

Radio-micrometer, A vacuum, 2:479.

Radiotelegraphy, Advantages of high spark frequency in, 5:153.

Radiotelegraphy, Quantitative experiments in long-distance, 7:315.

Ranges, Critical, A2 and A3 of pure iron, 10:315.

Ratio of the electromagnetic to the electrostatic unit of electricity, Comparison of the various methods of determining the, 3:605.

Ratio of the electromagnetic to the electrostatic unit of electricity, New determination of, 3:438. Ratio of transformers, 10:279.

Reagents, On the colorimetric determination of iron with special reference to chemical, 3:115.

Reagents used in colorimetric iron determination, 3:119.

Recomparison of the United States prototype meter, 1:5.

Recording device for precision photometers, 7:11. Rectifiers, Contact, of electric currents, 5:133.

Rectifying effects, some new, in conducting gases, 1:95.

Reflecting, Diffuse, power of various substances, 9:283.

Reflecting power of various metals, 7:197.

Reflection of electrical waves at a transition point, The coefficient of, 5:549.

Reflection spectra, Radiometric investigations of infra-red absorption and, 2:457.

Refractory elements, melting points of the, 10:79. Refractory oxides, Melting points of some, 10:295.

Regulation of potential transformers and magnetizing current, 6:273.

Regulation of transformers, 10:279.

Reheat factor, A short method of finding, 7:579.

Reid, C. E., E. B. Rosa, and M. G. Lloyd, Influence of wave form on the rate of integrating induction wattmeters, 1:421.

Relative intensities of metal and gas spectra from electrically conducting gases, 1:399.

Resistance, A new method for the absolute measurement of, 5:499.

Resistance and inductance of solenoidal coils, The influence of frequency on the, 4:161.

Resistance, Antenna, 9:65.

Resistance coils for alternating-current work, 8:495. Resistance coils, Measurement of the inductances of, 8:455.

Resistance of copper, Temperature coefficient of, 7:71.

Resistance of steam turbine wheels, Windage, 10:191.

Resistance, standard, A new form of, 5:413.

Resistance thermometers, new calorimetric, 9:483. Resistances, The variation of, with atmospheric humidity, 4:121.

Resistance thermometry, Platinum, at high temperatures, 6:149.

Resolving powers of objectives, 6:121.

Revision of the formulæ of Weinstein and Stefan for the mutual inductance of coaxial coils, 2:331. Ring specimens, Errors in magnetic testing with,

5:435.

Rosa, Edward B., A new form of standard resistance, 5:413.

A new method for the absolute measurement of resistance, 5:499.

----, Calculation of the self-inductance of single-layer coils, 2:161.

The Gray absolute electro-dynamometer, 2:71.

, Determination of the ratio of transformation and of the phase relations in transformers, 6:r.

—, On the geometrical mean distances of rectangular areas and the calculation of self-inductance, 3:r.

The compensated two-circuit electro-dynamometer, 3:43.

——, On the self-inductance of a toroidal coil of rectangular section, 4:141.

Photometric units and nomenclature, 6:543.
 Revision of the formulæ of Weinstein and Stefan for the mutual inductance of coaxial coils, 2:331.

The mutual inductance of a circle and a coaxial single-layer coil—The Lorenz apparatus and the Ayrton-Jones electro-dynamometer, 3:209.

The self and mutual inductance of linear conductors, 4:301.

and any number of layers of wire, 4:369.

——, Wattmeter methods of measuring power expended upon condensers and circuits of low-power factor, 1:383.

----, and E. C. Crittenden, Flame standards in photometry, 10:557.

----, and F. W. Grover, Formulas and tables for the calculation of mutual and self-inductance (revised), 8:1.

derson's method, using alternating currents and a vibration galvanometer, 1:291.

ity, 1:153.

—, —, Use of serpentine in standards of inductance, 1:337.

ductance, 1:125.

——, and H. D. Babcock, The variation of resistances with atmospheric humidity, 4:121.

, and Louis Cohen, Formulæ and tables for the calculation of mutual and self-inductance

4:149. On the self-inductance of circles,

, The mutual inductance of coaxial solenoids, 3:305.

______, The mutual inductance of two circular coaxial coils of rectangular section, 2:359. Rosa, Edward, and N. E. Dorsey, A ne ≥ determination of the ratio of the electromagnetic to the electrostatic unit of electricity, 3:438.

, —, A comparison of the various methods of determining the ratio of the electromagnetic to the electrostatic unit of electricity, 3:605.

, G. W. Vinal, and A. S. McDaniel, Silver voltameter—Part I. First series of quantitative experiments, 9:151.

The chemistry of the filter-paper voltameter and the explanation of striations, 9:211.

Second series of quantitative experiments and the preparation and testing of silver nitrate 9:493.

Third series of quantitative experiments and special investigations, 10:475.

—, M. G. Lloyd, and C. E. Reid, Influence of wave form on the rate of integrating induction wattmeters, 1:421.

—, N. E. Dorsey, and J. M. Miller, Determination of the international ampere in absolute measure, 8:269.

Rotating lamp method, On the determination of the mean horizontal intensity of incandescent lamps by the, 2:415.

Rotating sectored disk, Talbot's law as applied to the, 2:1.

Rubber, Determination of total sulphur in, 8:445. Russell-Léonard photometers, On the theory of the Matthews and the, for the measurement of mean spherical and mean hemispherical intensities, 1:255.

5

Scale, Direct-reading candlepower, 7:11.

Scale, natural, of pure color, Method for constructing the, 6:89.

Scale of temperature, On the establishment of the thermodynamic, 3:237.

Scale, On the standard, of temperature in the interval o° to 100° C, 3:663.

Scale, Volt, for a watts-per-candle meter, 5:543.

Secondary spectra and the conditions under which they may be produced, 1:83.

Sectored disk, Talbot's law as applied to the rotating, 2:r.

Selective radiation from the Nernst glower, 4:533.

Selective radiation from various solids, 5:159. Selective radiation from various solids, II, 6:301.

Selective radiation from various substances, III, 7:343.

Selective radiation of incandescent lamps, Preliminary measurements on temperature and, 2:319.

Self and mutual inductance of linear conductors, 4:301.

Self-inductance, Calculation of, 3:1.

Self-inductance, Formulæ and tables for the calculation of mutual and, 5:r.

Self-inductance of a coil of any length and any number of layers of wire, 4:369.

Self-inductance of a solenoid of any number of layers, 4:383.

Self-inductance of a toroidal coil of rectangular section, 4:141.

Self-inductance of circles, On the, 4:149.

Self-inductance of coils, The influence of frequency upon the, 2:275.

Self-inductance of single-layer coils, Calculation of the, 2:161.

Sensibility and accuracy, Polarimetric, 2:249.

Serpentine, Use of, in standards of inductance, 1:337.

Setting of a mercury surface to a required height 10:371.

Silsbee, F. B., P. G. Agnew and, Accuracy of the formulas for the ratio, regulation, and phase angle of transformers, 10:279.

Silver and iodine voltameters and the determination of the faraday, Comparison of the, 10:425. Silver coulometer, 1:349.

Silver voltameter, A study of the, 1:21.

Silver voltameter—Part I. First series of quantitative experiments, 9:151.

Silver voltameter—Part II. The chemistry of the filter-paper voltameter and the explanation of striations, 9:211.

Silver voltameter—Part III. Second series of quantitative experiments and the preparation and testing of silver nitrate, 9:493.

Silver voltameter—Part IV. Third series of quantitative experiments and special investigations, 10:475.

Simplified formula for the change in order of interference due to changes in temperature and pressure of air, 9:479.

Single-layer coil, Mutual inductance of a circle and a coaxial, 3:209.

Single-layer coils, Calculation of the self-inductance, 2:161.

Smokeless powder, Modified form of stability test for, and similar materials, 9:119.

Sodium oxalate and its influence upon the test for neutrality, Hydrolysis of, 8:519.

Sodium sulphate, Transition temperature of, 3:641. Solenoid, The self-inductance of a, of any number of layers, 4:383.

Solenoid coils, The influence of frequency on the resistance and inductance of, 4:161.

Solenoids, Exact formula for the mutual inductance of coaxial. 3:295.

Solenoids, The mutual inductance of coaxial, 3:305.

Solids, various, Radiation from, 5:159. Solids, various, II, Selective radiation from, 6:301.

Some contact rectifiers of electric currents, 5:133. Specific heat of some calcium chloride solutions

between -35° C and $+20^{\circ}$ C, 6:379. Specifications, Preliminary, for Clark and Weston

standard cells, 3:623.

Spectra, Of mixed gases, 1:77.

Spectra, On secondary, and the conditions under which they may be produced, 1:83.

Spectra, The relative intensities of metal and gas, from electrically conducting gases, 1:399.

Spectral radiation of a uniformly heated enclosure, Constants of, 10:1.

Spectrophotometer, A pocket, 2:317.

Spectrum lines as light sources, 2:244.

Spectrum lines as light sources in polariscopic measurements, 2:239.

Spherical reduction factors in photometry, 4:105. Squier, George O., and Albert C. Crehore, Oscillatory

interference bands, 7:131. Standard cell, The electrode equilibrium of the,

Standard cell, Weston, The temperature formula

of, 5:309.

Standard cells, Clark and Weston, 4:1.

Standard resistance, A new form of, 5:413.

Standard weights and measures of United States. History of, 1:365.

Standard, Working, Pentane lamp as a, 10:391.

Standardization of potassium permanganate solution by sodium oxalate, 8:611.

Standards, Flame, 10:557.

Standards of capacity, Mica condensers as, 6:431.

Standards of inductance, Use of serpentine in, 1:337. Steam-turbine expansion line on the Mollier diagram, and a short method of finding the reheat factor, 7:579.

Steam turbine wheels, Windage resistance of, 10:191. Steatite fibers, 1:102.

Steel, transformer, The testing of, 5:453.

Stefan for the mutual inductance of coaxial coils, Revision of the formulæ of Weinstein and, 2:331. Stillman, M. H., Note on the setting of a mercury surface to a required height, 10:371.

Stokes, H. N., and I. R. Cain, On the colorimetric determination of iron with special reference to chemical reagents, 3:115.

-, On sulphocyanic acid, 3:157.

Study of the silver voltameter, 1:21.

Substances, Various, Diffuse reflecting power of,

Substances, IV, Various, Selective radiation from,

Sucrose in water solution, Influence of basic lead acetate on optical rotation of, 3:105.

Sugars, Influence of atmospheric conditions in the testing of, 10:537.

Sulphocyanic acid, 3:157.

Sulphur, Boiling point of, 3:281.

Sulphur boiling point, Constancy of the, 7:127.

Sulphur, Determination of total, in india rubber, 8:445.

Sunlight, Action of, upon some lubricating oils, 7:227.

Surfaces, Geometrical theory of radiating, 3:81.

T

Tables, Formulæ and, for the calculation of mutual and self-inductance, 5:1.

Talbot's law as applied to the rotating sectored disk, 2:1.

Tantalum, Note on the thermoelectric properties of, 6:107.

Taylor, A. H., E. C. Crittenden and, Pentane lamp as a working standard, 10:391.

Telegraphy, Radio-, Advantages of a high spark frequency in, 5:153.

Telephonic transmission, Influence of terminal apparatus on, 5:231.

Temperature and selective radiation of incandescent lamps, Preliminary measurements on, 2:319.

Temperature, Capacity and phase difference of paraffined paper condensers as functions of, 7:495. Temperature coefficient of resistance of copper. 7:71.

Temperature formula for the Weston standard cell,

Temperature, Luminosity and, 6:337.

Temperature of the arc, On the, 1:109.

Temperature scale between 100° and 500° C, 7:1.

Temperature, Simplified formula for the change in order of interference due to changes in, and pressure of air, 9:479.

Temperatures, Ocean, In the vicinity of icebergs and in other parts of the ocean. Observations on, 10:267.

Temperature, Standard scale of, in the interval oo to 100° C. 3:663.

Temperature, Thermodynamic scale of, 3:237.

Temperature, Transition, of sodium sulphate, 3:641.

Temperature uniformity in an electric furnace, 10:451.

Terminal apparatus, Influence of, on telephonic transmission, 5:231.

Testing, magnetic, Errors in, with ring specimens, 5:435.

Testing of clinical thermometers, C. W. Waidner and L. A. Fischer, 1:275.

Testing of glass volumetric apparatus, The, 4:553. Testing of sugars, Influence of atmospheric conditions in the. 10:537.

Testing of transformer steel, 5:453.

Testing potential transformers, 10:410.

Theoretical and experimental study of the vibration galvanometer, 6:347.

Theory, Geometrical, of radiating surfaces, 3:81.

Theory of coupled circuits, 5:511.

Theory of the Hampson liquefier, 6:125.

Theory of the Matthews and the Russell-Léonard photometers for the measurement of mean spherical and mean hemispherical intensities, 1:255.

Thermal expansion, Density and, of ethyl alcohol and of its mixtures with water, 9:327.

Thermocouples, Note on cold-junction corrections for, 9:553.

Thermodynamics of concentration cells, 7:475.

Thermoelectric properties of tantalum and tungsten Note on the, 6:107.

Thermometer, constant-pressure, Establishment of the thermodynamic scale of temperature by means of, 3:237.

Thermometer, mercurial, Correction for emergent stem of the, 8:239.

Thermometers, Calorimetric resistance, 3:641.

Thermometers, Heat treatment of high-temperature mercurial, 2:189.

Thermometers, Resistance, New calorimetric, 9:483.

Thermometers, Testing of clinical, 1:275.

Thermometric lag, 8:659.

Thomson bridge, Four-terminal conductor and the, 8:559.

Toroidal coil, On the self-inductance of a, of rectangular section, 4:141.

Transformer steel, The testing of, 5:453.

Transformer, Study of the current, with particular reference to iron loss, 7:423.

Transformers, Accuracy of the formulas for the ratio, regulation, and phase angle of, 10:279.

Transformers, Determination of the ratio of transformation and of the phase relations in, 6:1.

Transformers, Effect of wave form upon the iron losses in, 4:477.

Transformers, Instrument, Determination of the constants of, 6:281.

Transformers, Potential, 10:419.

Transformers, Potential, and magnetizing current, Regulation of, 6:273.

Transition point, The coefficient of reflection of electrical waves at a, 5:549.

Treatment, Effect of heat, upon the drying of clays, 7:143.

Treatment of high-temperature mercurial thermometers, Heat, 2:189.

Tubes, light, Discussion of, 3:81.

Tubular electrodynamometer for heavy currents, $8:6_{51}$.

Tugman, Orin, P. G. Nutting and, Intensities of some hydrogen, argon, and helium lines in relation to current and pressure, 7:49.

Tungsten comparison lamp in the photometry of carbon lamps, 5:555.

Tungsten, Note on the thermoelectric properties of, 6:107.

Turbine wheels, Windage resistance of, 10:191.

Tuttle, J. B., C. E. Waters and, Determination of total sulphur in india rubber, 8:445.

Two-circuit electrodynamometer, Compensated, 3:43.

U

Uniformity of temperature in an electric furnace, 10:451.
Uniformly heated inclosure, Constants of spectral

radiation of a, 10:1.
United States prototype meter, Recomparison of

United States prototype meter, Recomparison of the, 1:5.

Unit of electricity, Comparison of various methods of determining ratio of electromagnetic to the electrostatic, 3:605.

Unit of electricity, New determination of ratio of electromagnetic to electrostatic, 3:438.

Unit of luminous intensity of the United States, Comparison of, with those of Germany, England, and France, 3:65. Units, Electrical, Principles involved in international adoption of, 5:243.

Units, Photometric, and nomenclature, 6:543.

Units, The so-called international electrical, 1:39.
Use of serpentine in standards of inductance, 1:337.
Use of white walls in a photometric laboratory, 1:417.

V

Vacuum radio micrometer, 2:479.

Vanadium, Determination of, in vanadium and chrome-vanadium steels, 7:477.

Variation of resistances with atmospheric humidity, 4:121.

Various solids, II, Selective radiation from, 6:301. Veazey, B. H., N. S. Osborne and, The testing of

Veazey, B. H., N. S. Osborne and, The testing of glass volumetric apparatus, 4:553.

Vibration galvanometer, Measurement of inductance by Anderson's method, using alternating currents and a, 1:291.

Vibration galvanometer, Theoretical and experimental study of the, 6:347.

Vinal, G. W., and S. J. Bates, Comparison of the silver and iodine voltameters and the determination of the faraday, 10:425.

——, E. B. Rosa, and A. S. McDaniel, Silver voltameter—Part I. First series of quantitative experiments, 9:151.

The chemistry of the filter-paper voltameter and the explanation of striations, 9:211.

Second series of quantitative experiments and the preparation and testing of silver nitrate, 9:493.

—, —, Silver voltameter—Part IV. Third series of quantitative experiments and special investigations, 10:475.

Visibility of radiation. Recalculation of König's date, 7:235.

Volt scale for a watts-per-candle meter, 5:543.

Voltameter, A study of the silver (see also Coulometer), 1:21.

Voltameter, Silver—Part I. First series of quantitative experiments, 9:151.

Voltameter, Silver—Part II. Chemistry of the silver-paper voltameter and the explanation of striations, 9:211.

Voltameter, Silver—Part III. Second series of quantitative experiments and the preparation and testing of silver nitrate, 9:493.

Voltameter, Silver—Part IV. Third series of quantitative experiments and special investigations, 10:475.

Voltameters, Comparison of the silver and iodine, and the determination of the faraday, 10:425.

Voltmeter testing, A deflection potentiometer for, 4:275.

Voltmeters, Comparison of American direct-current switchboard, 7:407.

Volumetric apparatus, glass, The testing of, 4:553.

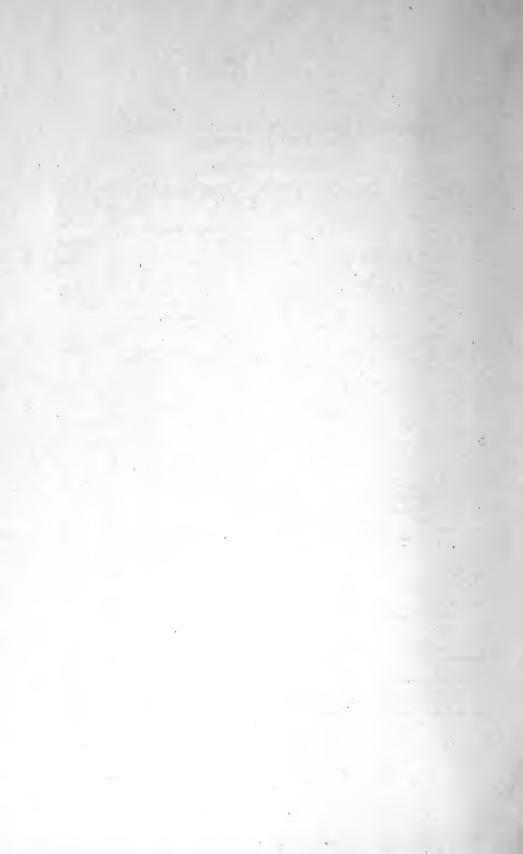
W

- Waidner, C. W., Platinum resistance thermometry at high temperatures, 6:149.
- , and G. K. Burgess, On the constancy of the sulphur boiling point, 7:127.
- -, ---, On the temperature of the arc, 1:109.
- -, ----, Optical pyrometry, 1:189. -, ----, Preliminary measurements on temperature and selective radiation of incandescent lamps, 2:319.
- -, Radiation from and melting points of palladium and platinum, 3:163.
- -, Temperature scale between 100° and 500° C, 7:1.
- -, and H. C. Dickinson, On the standard scale of temperature in the interval o° to 100° C. 3:663.
- -, ----, and J. J. Crowe, Observations on ocean temperatures in the vicinity of icebergs and in other parts of the ocean, 10:267.
- -, and L. A. Fischer, The testing of clinical thermometers, 1:275.
- Waltenberg, R. G., G. K. Burgess and, Melting points of the refractory elements. I-Elements of atomic weight from 48 to 59, 10:79.
- Wanner pyrometer, 1:226.
- Water, Ethyl alcohol and of its mixtures with, Density and thermal expansion, of, 9:327.
- Water of crystallization, Radiometric investigation of, 7:619.
- Waters, C. E., Action of sunlight and air upon some lubricating oils, 7:227.
- , Behavior of high-boiling mineral oils on heating in the air, 7:365.
- -, F. A. Wolff and, Clark and Weston standard cells, 4:1.
- -, ----, Preliminary specifications for Clark and Weston standard cells, 3:623.
- -, The electrode equilibrium of the standard cell, 4:81.
- -, and J. B. Tuttle, Determination of total sulphur in india rubber, 8:445.
- Watthour meters, American direct current, 10:161. Wattmeter methods of measuring power expended upon condensers and circuits of low-power factor, 1:383.
- Wattmeters, 3:57.
- Wattmeters, Influence of wave form on the rate of integrating induction, 1:421.
- Watts-per-candle meter, A volt scale for, 5:543.
- Wave form, Dependence of magnetic hysteresis upon, 5:381.
- Wave form, Effect of, upon the iron losses in transformers, 4:477.
- Wave form, Influence of, on the rate of integrating induction wattmeters, 1:421.
- Wave lengths of neon, 8:539.
- Wave lengths, relative, Modified method for the determination of, 6:573.

- Waves, Alternating current, Analysis of, 9:567.
- Waves, electrical, Detector for small alternating currents and, 1:435.
- Waves, EMF, Approximate experimental method for the analysis of, 6:95.
- Weber, H. C. P., Atomic weight of bromine, 9:131.
- -, Modified form of stability test for smokeless powder and similar materials, 9:119.
- -, The preparation of chloroplatinic acid by electrolysis of platinum black, 4:365.
- -, W. A. Noyes and, The atomic weight of chlorine, 4:345.
- Weight of bromine, Atomic, 9:131.
- Weights and measures of United States, History of standard, 1:365.
- Weinstein and Stefan for the mutual inductance of coaxial coils, Revision of the formulæ of, 2:331.
- Wenner, Frank, Four-terminal conductor and the Thomson bridge, 8:559.
- -, Theoretical and experimental study of the vibration galvanometer, 6:347.
- Weston and Clark standard cells, A new determination of the electromotive force of, by an absolute electrodynamometer, 2:33.
- Weston, Clark and, Standard cells, 4:1.
- Weston standard cell, The temperature formula of, 5:300.
- White light from the mercury arc and its complementary, 6:265.
- Wien's displacement law, Deduction of, 8:545.
- Windage resistance of steam turbine wheels, E. Buckingham, 10:191.
- Wireless telegraphy. See Radio-telegraphy, 5:153. Wolff, F. A., The principles involved in the selection and definition of the fundamental electrical units to be proposed for international adoption. 5:243.
- -, The so-called international electrical units. 1:39.
- , The temperature formula of the Weston standard cell, 5:309.
- -, and C. E. Waters, Clark and Weston standard cells, 4:1.
- -, ----, Preliminary specifications for Clark and Weston standard cells, 3:623.
- -, ----, The electrode equilibrium of the standard cell, 4:81.
- -, and J. H. Dellinger, Electrical conductivity of commercial copper, 7:103.
- Woodhull, L. R., Herbert E. Ives and, A tungsten comparison lamp in the photometry of carbon lamps, 5:555.
- Working standard, Pentane lamp as a, 10:391.

\mathbf{z}

- Zinc, purification and preparation of, for standard cells, 3:625.
- Zinc sulphate, purification and preparation of, for standard cells, 3:627.



PUBLICATIONS ISSUED BY THE BUREAU OF STANDARDS, DEPARTMENT OF COMMERCE

SCIENTIFIC PAPERS

ı.	Recomparison of the United States Prototype Meter L. A. Fischer
2.	A Study of the Silver Voltameter
3.	The So-called International Electrical Units Frank A. Wolff
	The Constant of Mined Const
5.	On Secondary Spectra and the Conditions under which They May Be
_	Produced
6.	Some New Rectifying Effects in Conducting Gases P.G. Nutting
7.	On Fibers Resembling Quartz in Their Elastic Properties K. E. Guthe
8.	On the Temperature of the Arc C. W. Waidner and G. K. Burgess
9.	The Absolute Measurement of Inductance . E. B. Rosa and F. W. Grover
10.	The Absolute Measurement of Capacity E. B. Rosa and F. W. Grover
II.	On the Temperature of the Arc
12.	On the Theory of the Matthews and the Russell-Leonard Photom-
	eters for the measurement of mean spherical and mean fremi-
	spherical Intensities
13.	The Testing of Clinical Thermometers C. W. Waidner and L. A. Fischer
14.	Measurement of Inductance by Anderson's Method, Using Alter-
	nating Currents and a Vibration Galvanometer . E. B. Rosa and F. W. Grover
15.	Use of Serpentine in Standards of Inductance . E. B. Rosa and F. W. Grover The Silver Coulometer
10.	The Silver Coulometer
17.	Wattmeter Methods of Measuring Power Expended upon Condensers
10.	and Circuits of Low Power Factor
19.	The Relative Intensities of Metal and Gas Spectra from Electrically Conducting Gases
20.	Conducting Gases
21.	Influence of Wave Form on the Rate of Integrating Induction Watt-
	meters E. B. Rosa, M. G. Lloyd, and C. E. Reid
22.	Detector for Small Alternating Currents and Electrical Waves L. W. Austin
23.	The Positive Charges Carried by the Canal Rays L. W. Austin
24.	The Positive Charges Carried by the Canal Rays L. W. Austin Radiation from Platinum at High Temperatures
25.	A Five-Thousand-Volt Generator Set
26.	A Five-Thousand-Volt Generator Set
27.	A New Determination of the Electromotive Force of Weston and
_	Clark Standard Cells by an Absolute Electrodynamometer K. E. Guthe The Gray Absolute Electrodynamometer
28.	The Gray Absolute Electrodynamometer
29.	Construction and Calculation of Absolute Standards of Inductance . J. G. Coffin
30.	An Efficiency Meter for Electric Incandescent Lamps
	Calculation of the Self-Inductance of Single-Layer Coils
31.	Heat Treatment of High-Temperature Mercurial Thermometers
32.	Heat Treatment of Fight-Temperature Mercurial Thermometers.
22	A New Potentiometer for the Measurement of Electromotive Force
33.	and Current H B Brooks
24	and Current
34.	Polarimetric Sensibility and Acquiracy P. R. Nutting
25·	Polarimetric Sensibility and Accuracy
37	The Influence of Frequency upon the Self-Inductance of Coils I. C. Coffin
38.	The Influence of Frequency upon the Self-Inductance of Coils J. G. Coffin Experiments on the Heusler Magnetic Alloys K. E. Guthe and L. W. Austin
30.	A Pocket Spectrophotometer
53.	1

40.	Preliminary Measurements on Temperature and Selective Radiation of Incandescent Lamps
	Inductance of Coaxial Coils Edward B. Rosa
	The Mutual Inductance of Two Circular Coaxial Coils of Rectangular Section
43.	On the Determination of the Mean Horizontal Intensity of Incandescent Lamps by the Rotating Lamp Method E. P. Hyde and F. E. Cady Purity and Intensity of Monochromatic Light Sources P. G. Nutting Radiometric Investigations of Infra-Red Absorption and Reflection
	Purity and Intensity of Manachromatic Light Sources D. C. Noutier
44.	Turity and intensity of monochromatic right bources 1. G. Watting
45-	Radiometric Investigations of Infra-Red Absorption and Reflection
	Spectra
46	A Vacuum Radiomicrometer
40.	Spectra
47.	On the Geometrical Mean Distances of Rectangular Areas and the
	Calculation of Self-Inductance E. B. Rosa
48.	The Compensated Two-Circuit Electrodynamometer E. B. Rosa
<i>i</i> 0	Complete Form of Fechner's Law
47.	Calculation of Self-Inductance
50.	A Comparison of the Unit of Luminous Thensity of the United States
	with Those of Germany, England, and France
51.	Geometrical Theory of Radiating Surfaces, with Discussion of Light
	Tubes $EPHvde$
F2	The Influence of Basic Lead Acetate on the Optical Rotation of
32.	Comme in Wester Schooling to the Optical Rotation of
	Sucrose in Water Solution F. J. Bates and J. C. Blake On the Calorimetric Determination of Iron, with Special Reference to Chemical Reagents
53.	On the Calorimetric Determination of Iron, with Special Reference
	to Chemical Reagents H. N. Stokes and I. R. Cain
E 1	On Sulphocyanic Acid H N Stokes and I R Cain
34.	Radiation from and Melting Points of Palladium and Platinum
55.	Radiation from and Merting Foints of Fanadrum and Flatinum
_	
56.	The Mutual Inductance of a Circle and a Coaxial Single-Layer Coil—
	The Lorenz Apparatus and the Ayrton-Jones Absolute Electro-
	dynamometer
	On the Establishment of the Thermodynamic Scale of Temperature
57.	Of the establishment of the Thermodynamic Scale of Temperature
	by Means of the Constant-Pressure Thermometer Edgar Buckingham
58.	An Exact Formula for the Mutual Inductance of Coaxial Sole-
•	noids
50	The Mutual Inductance of Coaxial Solenoids F. B. Rosa and L. Cohen
23.	The Production of High-Frequency Oscillations from the Electric
00.	The Foundation of High-Frequency Oscinations from the Electric
_	Arc
61.	Arc
62.	Melting Points of the Iron Group Elements by a New Radiation
	Method
62	On the Determination of the Mean Horizontal Intensity of Incandescent Lamps
υ <u>ე</u> .	descent I among
_	descent Lamps
64.	Simultaneous Measurement of the Capacity and Power Factor of
	Condensers
65.	A New Determination of the Ratio of the Electromagnetic to the
•	Electrostatic Unit of Electricity E. B. Rosa and N. E. Dorsey
66	A Comparison of the Various Methods of Determining the Ratio of the
00.	
	Electromagnetic to the Electrostatic Unit of Electricity
	E. B. Rosa and N. E. Dorsey
67.	Preliminary Specifications for Clark and Weston Standard Cells.
	F.A.Wolff and $C.E.Waters$
68.	Calorimetric Resistance Thermometers and the Transition Tempera-
٠	ture of Sodium Sulphate H. C. Dickinson and E. F. Mueller
	O = 41 = Ct - 1 = 1 C = 1 = CT 1 = 0 A = = = 0 C
09.	On the Standard Scale of Temperature in the Interval 0° to 100° C.
	C. W. Waidner and H. C. Dickinson
70.	Clark and Weston Standard Cells
	A Comparative Study of Plain and Frosted Lamps . E. P. Hyde and F. E. Cady
72.	The Variation of Desistance with Atmospheric Humility
13.	The Variation of Resistances with Atmospheric Humidity
	E. B. Rosa and H. D. Babcock
74.	On the Self-Inductance of a Toroidal Coil of Rectangular Section .
	Edward B. Rosa

75· 76.	On the Self-Inductance of Circles Edward B. Rosa and Louis Cohen The Influence of Frequency on the Resistance and Inductance of Self-Rosidal Coils
78.	Solenoidal Coils
79. 80.	A Deflection Potentiometer for Voltmeter Testing
81. 82.	The Atomic Weight of Chlorine
	The Self-Inductance of a Coil of any Length and any Number of
	Self-Inductance of a Solenoid of any Number of Layers Louis Cohen Instruments and Methods Used in Radiometry
86. 87.	A Quartz Compensating Polariscope with Adjustable Sensibility F. J. Bates An Apparatus for Determining the Form of a Wave of Magnetic Flux
	Flux
	Function of a Periodic Variable Given by the Steady Reading of an
	Instrument, with a Note on the Use of the Capillary Electrometer with Alternating Voltages
91.	Selective Radiation from the Nernst Glower
92.	The Testing of Glass Volumetric Apparatus N. S. Osborne and B. H. Veazey
93.	topical and Tables for the Calculation of Mittual and Sen Thomes
94.	Some Contact Rectifiers of Electric Currents
95.	A Method for Producing Feebly Damped High-Frequency Electrical
06	Oscillations for Laboratory Measurements
90.	
97· 98.	Selective Radiation from Various Solids
00	Sensibility
	Note on the Approximate Values of Bessel's Functions for Large Arguments
	The Influence of Terminal Apparatus on Telephonic Transmission
102.	The Principles Involved in the Selection and Definition of the Fundamental Electrical Units to be Proposed for International
103.	Adoption
104.	The Temperature Formula of the Weston Standard Cell F. A. Wolff
105.	Radiation, Constants of Metals
106.	Dependence of Magnetic Hysteresis upon Wave Form Morton G. Lloyd
107.	A New Form of Standard Resistance
108.	Errors in Magnetic Testing with Ring Specimens Morton G. Lloyd
109.	The Testing of Transformer Steel M. G. Lloyd and J. V. S. Fisher A New Method of Determining the Focal Length of a Converging
	Lens
113.	A Volt Scale for a Watts-per-candle Meter Herbert E. Ives
114.	Point
	A Tungsten Comparison Lamp in the Photometry of Carbon
116.	Lamps
	Relations in Transformers E. B. Rosa and M. G. Lloyd The Determination of the Magnetic Induction in Straight Bars
•	

11	8. A Method for Constructing the Natural Scale of Pure Color P. G. Nutting
11	9. An Approximate Method for the Analysis of EMF. Waves o. The Thermoelectric Properties of Tantalum and Tungsten W. W. Coblentz
12	o. The Thermoelectric Properties of Tantalum and Tungsten . W. W. Coblentz
12	r. The Estimation of the Temperature of Copper by Means of Optical
* 2	Pyrometers George K. Burgess, assisted by J. F. Crowe 2. The Resolving Power of Objectives
12	2. The Resolving Power of Objectives
12	4. Platinum Resistance Thermometry at High Temperatures
	C. W. Waidner and G. K. Burgess
12	
12	5. The Daylight Efficiency of Artificial Illuminants
	tance and Capacity
12	7. Effect of Phase of Harmonics upon Acoustic Quality
т 2 !	White Light from the Measury Are and its Complementary II. I. I. I. I.
120	o. The Regulation of Potential Transformers and the Magnetizing
	9. The Regulation of Potential Transformers and the Magnetizing Current
1.34	of the Defermination of the Constants of Instrument Transformers
	1. Selective Radiation from Various Solids, II
13	1. Selective Radiation from Various Solids, II
13:	2. Luminous Efficiency of the Firefly Herbert E. Ives and W. W. Coblentz
13;	3. Luminosity and Temperature
134	nometer
13	5. Specific Heat of Some Calcium Chloride Solutions between -35° C.
-	and +20° C H. C. Dickinson, E. F. Mueller, and E. B. George
130	6. On the Definition of the Ideal Gas Edgar Buckingham
13	7. Mica Condensers as Standards of Capacity
138	6. On the Definition of the Ideal Gas
	Hypergeometrical Series
140	o. The Comparative Sensitiveness of Some Common Detectors of
-7	Electrical Oscillations Louis IV. Austin
14	Electrical Oscillations
14:	2. A Modified Method for the Determination of Relative Wave Lengths,
	Especially Adapted to the Establishment of Secondary Stand-
- 4.	ards
14	4. A New Form of Direct-Reading Candlepower Scale and Recording
	Device for Precision Photometers George W. Middlekauff
14	4. A New Form of Direct-Reading Candlepower Scale and Recording Device for Precision Photometers
140	6. The Intensities of Some Hydrogen, Argon, and Helium Lines in
- 4	Relation to Current and Pressure P. G. Nutting and Orin Tugman The Townsort was Coefficient of Projectores of Copper
14	7. The Temperature Coefficient of Resistance of Copper
-4	
14	9. On the Constancy of the Sulphur Boiling Point
-	
150	o. Note on Oscillatory Interference Bands and Some of their Practical
	Applications
15	1. The Effect of Preliminary Heat Treatment upon the Drying of Clays
7 5	2. The Reflecting Power of Various Metals
15	3. The Action of Sunlight and Air upon Some Lubricating Oils . C. E. Waters
15	3. The Action of Sunlight and Air upon Some Lubricating Oils 4. The Visibility of Radiation. A Recalculation of Konig's Data 5. A Photometric Attachment for Spectroscopes
15	5. A Photometric Attachment for Spectroscopes
1.5	b. Selective Radiation from Various Substances, 111
15	T TV A
	tenna L. W. Austin

150.	Some Experiments with Coupled High-Frequency Circuits L. W. Austin Some Quantitative Experiments in Long Distance Radiotelegraphy
160. 161.	The Behavior of High-Boiling Oils on Heating in the Air C. E. Waters The Determination of Vanadium in Vanadium and Chrome-Vanadium Steels
162.	On the Computation of the Constant C ₂ of Planck's Equation by an Extension of Paschen's Method of Equal Ordinates
163.	A Comparison of American Direct Current Switchboard Voltmeters
164.	and Ammeters
T65.	Thermodynamics of Concentration Cells
166.	The Capacity and Phase Difference of Paraffined Paper Condensers as
	Functions of Temperature and Frequency Frederick W. Grover
167.	The Steam Expansion Line on the Mollier Diagram and a Short Method of Finding the Reheat Factor
168.	Study of the Current Transformer with Particular Reference to Iron Loss
16 <u>)</u> .	Formulas and Tables for the Calculation of Mutual and Self Induc-
170.	The Correction for Emergent Stem of a Mercurial Thermometer
171. 172.	Thermometric Lag
173.	Outline of Design of Deflection Potentiometers with Notes on the Design of Moving-Coil Galvanometers
174.	The Determination of Total Sulphur in India Rubber
175.	The Measurement of the Inductances of Resistance Coils
176.	The Measurement of the Inductances of Resistance Coils Frederick W. Grover and Harvey L. Curtis Luminous Properties of Electrically Conducting Helium Gas. II. Reproducibility P. G. Nutting Resistance Coils for Alternating Current Work H. L. Curtis and F. W. Grover
177.	Resistance Coils for Alternating Current Work . H. L. Curtis and F. W. Grover The Hydrolysis of Sodium Oxalate and Its Influence Upon the Tests
	for Neutrality
179.	On the Deduction of Wier's Displacement Low
100.	The Four Terminal Conductor and the Thomson Bridge Frank Wanner
182.	Standardization of Potassium Permanganate Solution by Sodium
102.	Oxalate
183.	Benzoic Acid as an Acidimetric Standard G. W. Morey
184.	A Tubular Electrodynamometer for Heavy Currents P. G. Agnew
185.	Thermometric Lag
186.	Oxalate
187.	A New Precision Colorimeter P. G. Nutting
188.	Instruments and Methods Used in Radiometry, II W. W. Coblentz
189.	muthate Method
100.	Energy Losses in Some Condensers Used in High-Frequency Circuits
TOT	Selective Radiation from Various Substances IV W W Cobleman
192.	Selective Radiation from Various Substances, IV
	Atomia Weight of Promine
193.	Similar Materials
195.	The Silver Voltameter.—Part II. The Chemistry of the Filter Paper
	voltameter and the Explanation of Striations . E. B. Rosa and G. W. Vinat
190.	The Diffuse Reflecting Power of Various Substances W. W. Coblentz

197.	Density and Thermal Expansion of Ethyl Alcohol and of Its Mixtures with Water N. S. Osborne, E. C. McKelvy, and H. W. Bearce
T08	
190.	A Micropyrometer
199.	to Changes in Temperature and Pressure of Air I. G. Priest
	New Colorinate in Perinter and Pressure of An
200.	New Calorimetric Resistance Thermometers
	The Silver Voltameter.—Part III. Second Series of Quantitative Ex-
201.	The Silver Voltameter.—Part III. Second Series of Quantitative Ex-
	periments and the Preparation and Testing of Silver Nitrate
	E. B. Rosa, G. W. Vinal, and A. S. McDaniel
202.	Note on Cold-Junction Corrections for Thermocouples P. D. Foote
202.	The Analysis of Alternating Current Waves by the Method of
3.	Fourier, with Special Reference to Methods of Facilitating the
	Computations
	Computations
204.	the Constants of Spectral Radiation of a Uniformly Heated in-
	closure or So-Called Black Body, Part I
205.	Melting Points of the Refractory Elements.—I. Elements of Atomic
	Weight from 48 to 59 G. K. Burgess and R. G. Waltenberg
206.	High-Frequency Ammeters J. H. Dellinger
207.	Weight from 48 to 59 G. K. Burgess and R. G. Waltenberg High-Frequency Ammeters J. H. Dellinger A Comparative Study of American Direct-Current Watthour Meters
-	T. T. Fitch and C. J. Huber
208.	Windage Resistance of Steam Turbine Wheels E. Buckingham
200.	Windage Resistance of Steam Turbine Wheels E. Buckingham Latent Heat of Fusion of Ice . H.C. Dickinson, D. R. Harper, and N. S. Osborne
21Ó.	Observations on Ocean Temperatures in the Vicinity of Icebergs and
	in other Parts of the Ocean . C.W. Waidner, H.C. Dickinson, and J. J. Crowe
211.	Accuracy of the Formulas for the Ratio, Regulation, and Phase Angle
	of Transformers
212	Melting Points of Some Refractory Oxides C. W. Kanolt
212.	The Critical Ranges As and As of Pure Iron G. K. Burgess and I. I. Crange
213.	Note on the Setting of Mercury Surface to a Paguired Height M. H. Stillman
214.	Microscopes Microscopes
215.	Micrometer Microscopes
210.	The Fentane Lamp as a Working Standard E.C. Crittenden and A. H. Taylor
217.	Testing Potential Transformers
218.	Micrometer Microscopes
	tion of the Faraday G. W. Vinal and S. J. Bates Production of Temperature Uniformity in an Electric Furnace . A. W. Gray
219.	Production of Temperature Uniformity in an Electric Furnace . A. W. Gray
220	The Silver Voltameter — Part IV Third Series of Quantitative Ex-
	periments and Special Investigations
-	periments and Special Investigations
221	Influence of Atmospheric Conditions in the Testing of Sugars
	F. I. Bates and F. P. Phelbs
222	Flame Standards in Photometry
222.	Traine Standards in Thotometry

CIRCULARS

No. 1. Verification of Standards and Measuring Instruments.

No. 2. Measurements of Length and Area, Including Thermal Expansion.
No. 3. Verification of Standards of Mass.
No. 4. Verification of Standards of Capacity.
No. 5. Testing of Clinical Thermometers.
No. 6. Fees for Electric, Magnetic, and Photometric Testing.

No. 7. Pérometer Testing and Heat Measurements.

No. 8. Testing of Thermometers.

No. 9. Testing of Glass Volumetric Apparatus.

No 10. Legal Weights (in pounds) per Bushel of Various Commodities.

No. 11. The Standardization of Bomb Calorimeters.

No. 12. Verification of Polariscopic Apparatus.

No. 13. Standard Specifications for the Purchase of Incandescent Electric Lamps.

No. 14. Analyzed Irons and Steels—Methods of Analysis. No. 15. The International Unit of Light.
No. 16. The Testing of Hydrometers.

No. 17. Magnetic Testing. No. 18. Standard Sheet Metal Gauge.

No. 19. Standard Density and Volumetric Tables.
No. 20. Testing of Electrical Measuring Instruments.
No. 21. Precision Measurements of Resistance and Electromotive Force.

No 22. Standard Specifications for Transformers, Oil-immersed, Self-cooled, 60cycle, 2200 Volts.

No. 23. Standardization of Electrical Practice in Mines.

No. 24. Publications of the Bureau of Standards.
No. 25. Standard Analyzed Samples—General Information.
No. 26. Analyzed Iron and Manganese Ores—Methods of Analysis.
No. 27. The Testing and Properties of Optical Instruments.
No. 28. The Determination of the Optical Properties of Materials.

No. 29. Announcement of a Change in the Value of the International Volt. No. 30. Lime: Its Properties and Uses.

No. 31. Copper Wire Tables.

No. 32. Standard Regulations for Manufactured Gas and Gas Service. No. 33. United States Government Specification for Portland Cement. No. 34. The Relation of the Horsepower to the Kilowatt. No. 35. Melting Points of Chemical Elements. No. 36. The Testing and Properties of Electrical Condensers.

No. 37. Electric Wire and Cable Terminology.

No. 38. The Testing of Mechanical Rubber Goods.

No. 39. Specifications for and Measurement of Standard Sieves. No. 39. Specifications for and Measurement of Standard Sieves.
No. 40. Sodium Oxalate as a Standard in Volumetric Analysis.
No. 41. Testing and Properties of Textile Materials.
No. 42. Metallographic Testing.
No. 43. The Metric Carat.
No. 44. Polarimetry.
No. 45. The Testing of Materials.
No. 46. The Testing of Barometers.
No. 47. Units of Weight and Measure: Definitions and Tables of Me

No. 47. Units of Weight and Measure; Definitions and Tables of Equivalents. No. 48. Standard Methods of Gas Testing.

TECHNOLOGIC PAPERS

 The Effect of Preliminary Heat Treatment upon the Drying of Clays (53 pp.).
 The Strength of Reinforced Concrete Beams. Results of Tests of 333
 Beams (first series) (200 pp.)
 R. L. Humphrey and L. H. Losse
 Tests of Absorptive and Permeable Properties of Portland Cement
 Mortars and Concretes, Together with Tests of Damp Proofing and
 Waterproofing Companyable and Materials (127 pp.) Waterproofing Compounds and Materials (127 pp.) Rudolph J. Wig
4. The Effect of Added Fatty and Other Oils upon the Carbonization of Load Carrying Capacity at Furnace Temperatures (78 pp.) . 8. A Rapid Method for the Determination of Vanadium in Steels,
Ores, etc., Based on Its Quantitative Inclusion by the Phosphomolybdate Precipitate (20 pp.). J. R. Cain and J. C. Hostetter
9. The Density and Thermal Expansion of Linseed Oil and Turpentine (27 pp.)

10. The Melting Points of Fire Bricks (17 pp.)

11. Comparison of Five Methods Used to Measure Hardness (27 pp.)

12. Ralph P. De Vries 12. Action of the Salts in Alkali Water and Sea Water on Cements (157

13.	The Evaporation Test for Mineral Lubricating and Transformer Oils
	(13 pp.)
14.	Legal Specifications for Infilm matting Gas (31 pp.). E. B. Rosa and R. S. MEBride Surface Institution of Pipes (4. pp.)
15.	Surface Insulation of Pipes (44 pp.) Burton McCollum and O. S. Peters The Manufacture of Lime (122 pp.)
17.	The Manufacture of Lime (130 pp.)
-/-	G. H. Brown and G. A. Murray
18.	Electrolysis in Concrete (137 pp.) . E. B. Rosa, Burton McCollum, and O. S. Peters
IQ.	Physical Testing of Cotton Yarns (31 pp.) W. S. Lewis
20.	Physical Testing of Cotton Yarns (31 pp.)
	The Dehydration of Clays (23 pp.)
21.	The Dehydration of Clays (23 pp.) G. H. Brown and E. T. Montgomery
22.	The Effect of Overhring Upon the Structure of Clays (23 pp.)
	The Technical Control of the Colloidal Matter of Clays (118 pp.) . H. E. Ashley
23.	The Determination of Phosphorus in Steels Containing Vanadium
24.	(17 pp) I R Cain and F H Tucker
25	(11 pp.)
26.	Earth Resistance and Its Relation to Electrolysis
	Burton McCollum and K. H. Logan
27.	Special Studies in Electrolysis Mitigation. I. A Preliminary Study
	of Conditions in Springfield, Ohio, with Recommendations for
_	Mitigation and Control (55 pp.) E. B. Rosa and Burton McCollum Methods of Making Electrolysis Surveys . Burton McCollum and A. H. Ahlborn
28.	Methods of Making Electrolysis Surveys . Button McCollum and A. H. Ahlborn
29.	The Variation in Results of Sieving with Standard Cement Sieves
	(16 pp.)
30.	Some Leadless Boro-Silicate Glazes Maturing at about 1100° C. (22 pp.)
31.	
32.	Special Studies in Electrolysis Mitigation, No. 2. Electrolysis from
0	Electric Railway Currents and Its Prevention—Experimental Test
	on a System of Insulated Negative Feeders in St. Louis (34 pp.)
	E. B. Rosa, Burton McCollum, and K. H. Logan
33.	Determination of Carbon in Steel and Iron by the Barium Carbonate
	Titration Method (12 pp.)
34.	Determination of Ammonia in Illuminating Gas (23 pp.) J. D. Edwards
30.	Industrial Gas Calorimetry
37.	Todine Number of Linseed and Petroleum Ons . W. H. Smith and J. B. Tuttle

MISCELLANEOUS

International Metric System. (Chart.)
Tables of Equivalents of United States Customary and Metric Weights and Measures. (See Circular 47.)
The International Metric System of Weights and Measures. (Pamphlet.)
First Conference on the Weights and Measures of the United States.
Second Annual Conference on the Weights and Measures of the United States.
Third Annual Conference on the Weights and Measures of the United States.
Fourth Annual Conference on the Weights and Measures of the United States.
Fifth Annual Conference on the Weights and Measures of the United States.
Sixth Annual Conference on the Weights and Measures of the United States.
Seventh Annual Conference on the Weights and Measures of the United States.

Eighth Annual Conference on the Weights and Measures of the United States. State and National Laws Concerning the Weights and Measures of the United States (second edition).

The National Bureau of Standards. (Descriptive pamphlet.)
Report of the International Committee on Electrical Units and Standards.

.











